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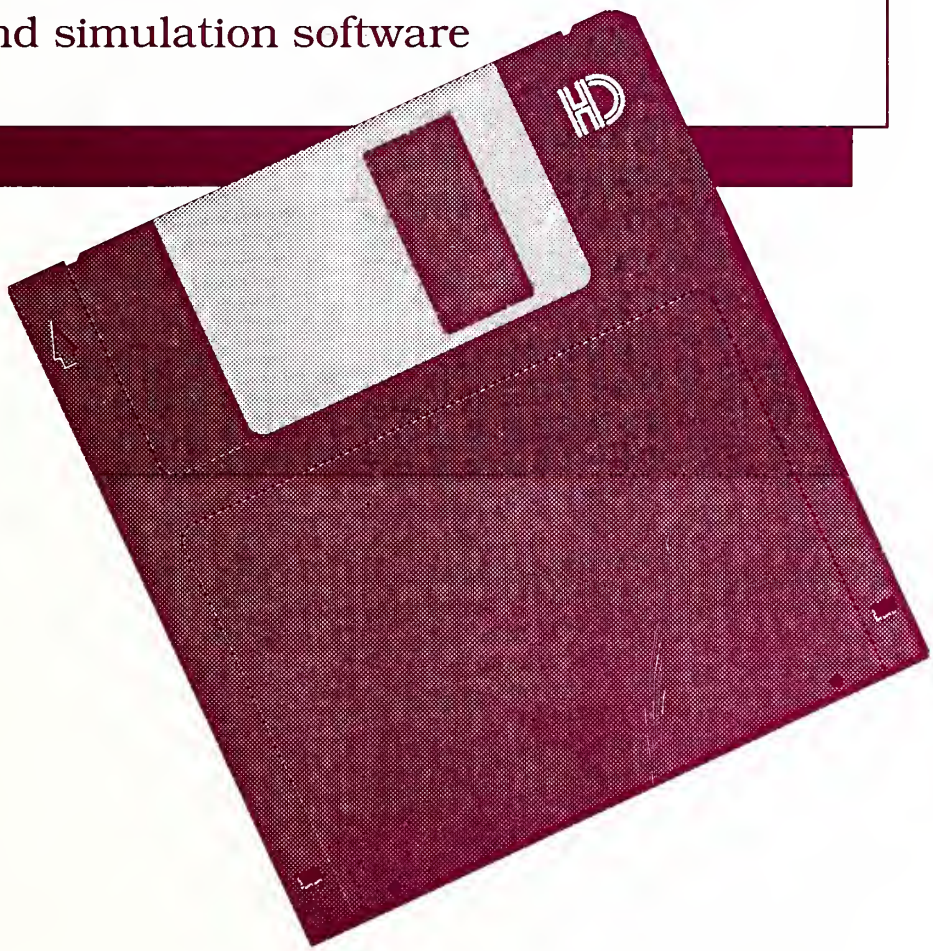

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PR-815	U.S. Government Software for Microcomputers

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DOCUMENTS COLLECTION

Contents

Administration 4
Administration-Government 5
Aerodynamics & Fluid Mechanics 5
Agriculture & Food 6
Atmospheric Sciences & Astronomy 6
Biological Sciences 7
Building Technology 8
Business & Trade 9
Chemistry 12
Civil & Structural Engineering 12
Communications 14
Communications-Speech 16
Computer Sciences 17
Computer Tools 19
Education & Training 20
Electrotechnology 21
Energy Sources, Generation, & Transportation 21
Environment 22
Energy-Nuclear 23
Health-Nutrition 24
Health Care 24
Library & information sciences 26
Manufacturing & Industrial 27
Materials sciences 27
Mathematics & Statistics 27
Medical Sciences 29
Military Sciences 30
Natural Resources, Geology, & Hydrology 30
Navigation 34
Ocean Sciences & Technology 34
Physics 35
Space Technology 36
Transportation Technology 36
Subject Index 39
Agency Index 41
Price code table 44
Order Form 45

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Specifications: The software is on eleven 5 1/4 inch and eight 3 1/2 inch diskettes, 360K and 720K double density. See the specifications for each package.

Data Collection Selection™ (Software)

Idea Works, Inc.

Order number PB93-500536CBX $100

Data Collection Selection™ uses artificial intelligence procedures to help researchers identify the appropriate data collection procedure given their objectives and assumptions. It provides detailed descriptions, references, and a point-by-point discussion of how the procedure does or does not fit your problem. It recommends a data collection procedure and provides reasons for that recommendation.

Specifications: The software is on one 5 1/4 inch and one 3 1/2 inch diskettes, 360K and 720K double density. File format: ASCII. System: IBM or compatible; MS DOS operating system, 512K. The documentation is contained in the package, not available separately.

Designer Research™ (Software)

Idea Works, Inc.

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Designer Research™ uses artificial intelligence strategies to design efficient empirical research projects by controlling extraneous variables, ruling out competing explanations, and assuring internal, external, construct, and statistical conclusion validity. It provides detailed consideration of the various design strategies.

Specifications: The software is on one 5 1/4 inch and one 3 1/2 inch diskettes, 360K and 720K double density. File format: ASCII. System: IBM or compatible; MS DOS operating system, 640K. The software package contains documentation, not available separately.

EX-SAMPLE+™ (Software)

Idea Works, Inc.

Order number PB93-500544CBX $100

EX-SAMPLE+™ is an expert decision support system that steers you to the appropriate formula and then computes the sample size for your research. It considers multiple analyses in the same study, identifies constraints on achieved sample size, and critiques your sampling plan to suffice ways to reduce the required sample size or increase the possible size given your resources and factors such as response rates, exclusions, and experimental mortality. EX-SAMPLE+™ is appropriate for a wide range of sampling designs, and helps avoid unnecessary sampling costs.

Specifications: The software is on one 5 1/4 inch and one 3 1/2 inch diskettes, 360K and 720K double density. File format: ASCII. System: IBM or compatible; MS DOS operating system, 640K. The documentation is contained in the package, not available separately.

Hyper-Stat™ (for microcomputers) (Software)

Idea Works, Inc.

Order number: see below.

Hyper-Stat™ is a hypertext dictionary which is memory-resident and can be used from within other programs to provide statistical, methodological, and graphical advice. It includes over 1900 definitions of statistical, graphical, and methodological terms. Over 4000 hypertext links permit users to view related definitions and choose the level of detail they prefer.

Specifications: Software is on two 5 1/4 inch and one 3 1/2 inch diskettes, 360K and 720K double density. File format: ASCII. System: IBM or compatible; MS DOS operating system, 6K. The software packages contain documentation, not available separately. A mouse is optional.

(Windows Version)

Order number PB93-500502CBX $100

Specifications: An MS-DOS or IBM-compatible machine with a hard disk is required. As a memory-resident TSR program, Hyper-Stat™ requires only 6K RAM.

(DOS Version)

Order number PB93-500494CBX $100

Specifications: As a memory-resident TSR program, Hyper-Stat™ requires only 6K RAM.

Measurement and Scaling Strategist™ (Software)

Idea Works, Inc.

Order number PB93-500528CBX $100

Measurement & Scaling Strategist™ helps researchers through the process of designing a measurement instrument or scale. It helps you decide whether to use a single-item or multiple item scale, and the appropriate level of measurement for each concept. It provides an editor in which to write questions, asks you questions to check for common composition problems such as double-barreled questions, recommends an ordering of questions in the questionnaire, and produces a draft questionnaire which can be further edited by any word processo.

Specifications: Software is on one 5 1/4 inch and one 3 1/2 inch diskettes, 360K and 720K double density. File format: ASCII. System: IBM or compatible; MS DOS operating system, 640K. The documentation is contained in the package, not available separately.

Statistical Navigator Professional™ (Software)

Idea Works, Inc.

Order number PB93-500569CBX $150

Statistical Navigator Professional™ provides an on-line statistical encyclopedia and statistical advisor that helps you select the appropriate statistic for your problem. It uses artificial intelligence strategies to consider over 200 types of statistical analysis, the identifies the best options based on your research objectives and assumptions. The package provides detailed descriptions, references, common statistical packages which can perform the analysis, and a point-by-point discussion of the technique does or not fit your problem.

Specifications: The software is on two 5 1/4 inch and one 3 1/2 inch diskettes, 360K and 720K double density. File format: ASCII. System: IBM or compatible; MS DOS operating system, 512K. The package includes documentation, not available separately.

WhichGraph™ (Software)

Idea Works, Inc.

Order number PB93-500551CBX $150

WhichGraph™ is an expert decision support system to be used with spreadsheets, graphing programs or statistical graphics packages to make your graphical presentations more effective. It identifies appropriate graphs for analyzing data, and identifies inappropriate or badly drawn graphs.

Specifications: The software is on five 5 1/4 inch and two 3 1/2 inch diskettes, 360K and 720K double density. File format: ASCII. System: IBM or compatible; MS DOS operating system, 640K. The package contains documentation, not available separately.

ADMINISTRATION

DA's Assistant, Version 1.0

Department of Justice

Order number PB90-501040CBX
Price: $100

The DA's Assistant is a tool for prosecutors to improve their internal case management and information management methods. It maintains information on cases, including defendants, charges, bonds/bail, sentences, court events, and related persons, such as victims, witnesses and attorneys. The system automates the data collection and maintenance of case management activities from the point of first report to the prosecutor through disposition and sentence expiration. Verification of certain data elements is used to ensure a high degree of accuracy before the data are stored to a central location. Once stored, this information is available to all authorized personnel for review or editing.

Information for documents, such as arrests warrants, charging instruments, subpeonas and victims' rights letters, can be generated as needed. Agency staff can then merge information with documents forms in a word processor to produce documents that include local statutory language, such as government and penal code sections.

Local, state, federal, and internal reporting requirements can be satisfied in two ways with the DA's Assistant. A standard set of frequently used reports has been preprogrammed and is available on demand. The report includes lists of cases ordered by court event, by date, by speedy trial date requirements, and all pending cases by case type. An ad hoc reporting capability is also provided to allow an administrator to create an unlimited number of additional reports to respond to new reporting requests as they arise.

Specifications: The software is on four 5 1/4 inch diskettes, 360K double density. System: IBM-PC/AT or compatible; MS DOS 3.1+ operating system, 640K. Language: DataFlex 2.2. DataFlex 2.2 software is required, and is not included: It must be purchased from a commercial source(for this information, contact Dave Robert at (916)392-2550).

◆ d-SSYS: A Computer Model for the Evaluation of Competing Alternatives, Version 4 (Model-Simulation)

Environmental Protection Agency

Order number PB93-502730CBX
Price code: D01

This study was instigated to develop a model that quantitatively evaluates competing research and development projects, and assists in prioritizing such projects when resources are not sufficient to conduct all of them. An evaluation model was developed, based upon existing multiattribute utility theory but with some modification and innovation. It helps determine the relative weights of the factors or criteria used to evaluate the projects under consideration, and determines the utilty function for each of the attributes. A unique factor is that it incorporates uncertainties of three types: (1) those dealing with the factor weights, (2) those dealing with the worth of each project with respect to each factor, and (3) those dealing with the utilities of the attributes. It is adapted to run on personal computers as well as on larger ones, although the distribution version available is designed for pc's. No special knowledge of the basic theory involved is required to exercise the computer model. Although, the study was designed with the objective of dealing with competing research and development projects, the model is sufficiently general so that it may be applied to any problem of competing alternatives.

Specifications: The software is on one 3 1/2 inch diskette, 720K double density. Documentation included; may be ordered separately as PB93-144483. System: IBM-PC or compatible ; DOS 2.0+ operating system, 512K. Language: FORTRAN.

Departmental Directives Management Information System (DDMIS)

Department of Housing and Urban Development

Order number PB88-216429CBX
Price: $60

It captures the full information life-cycle of the Department's directives. Initiated at the point at which a directive is introduced into clearance, printing, distribution, revision and expiration. The system provides timely and accurate management information regarding the cost and effectiveness of the issuances management program.

Specifications: The software is on three 5 1/4 inch and 3 1/2 diskettes, double density. System: IBM PC or compatible; MS-DOS 2.11 and 3.1 operating system, 512K. Language: dBase III Plus.

◆ Distributed Training Technology Cost Analysis Templates (TTCATS)

Department of Defense

Order number AD-M000 047CBX
Price code: D02

Training Technology Cost Analysis Templates (TTCAT) contains seven individual subprograms, or templates, that customize the LOTUS 1-2-3 spreadsheet to help project the cost of delivering training to geographically distributed locations. The cost estimates pertain either to delivery method and equipment configurations that have been independently determined to be appropriate for anticipated application or to configurations recommended by a companion expert-system based software program called TECHSELECT. the first six TTCATS templates calculate costs for a variety of distributed training delivery method and equipment configurations: asynchronous delivery via computer-based training with desktop microcomputers, asynchronous delivery via computer-based with portable or laptop microcomputers, asynchronous delivery via computer conferencing, synchronous delivery via audio conferencing, synchronous delivery via video conferencing with land-based microwave communications, and synchronous delivery via video conferencing with satellite-based communications. The last template calculates the cost of transporting trainees to a central training site.

Specifications: The software is on one 5 1/4 inch diskette, 360K double density. Documentation included; may be ordered separately as AD-A235 893. System: IBM PC or Compatible; MS DOS operating system. Language: Lotus 1 2 3 Ver. 1.0. Program requires atleast 256K of RAM.

ADMINISTRATION-GOVERNMENT

Automated Interstate Child Support Enforcement Forms (CSEFORMS)

Department of Health and Human Services

Order number PB91-506261CBX
Price code: D01

CSEFORMS is a microcomputer program which automates the completion and printing of the eight (8) Interstate Child Support Enforcement Forms. Entering, editing, printing, storing old cases, etc. are all possible with this program. The form itself is printed together with the case data that has been entered. Each case is stored on the hard disk, and may be selectively backed off for long-term, storage on diskette. Data fields which are repeated throughout the forms need only be entered once, and are then automatically copied onto all other forms. A simple menu system and on-line, context-sensitive help guide the user through multiple applications with no advance training necessary. Database utilities allow the user to perform selective case back-up, restore and removal. Printer utilities allow user to choose from one of three standard printers, or to create his own printer driver file.

Specifications: The software is on one 5 1/4 inch diskette, 360K double density. File format: dBase III Plus. System: IBM PC Compatible; PC DOS 3.0 operating system, 640K. Language: Clipper compiled .

✱ ◆ Federal Occupational and Career Information System (FOCIS) (Compressed Version 4.0-IBM 3 1/2 inch 720K)

Executive Office of the President, Office of Personnel Management

Order number PB93-502532CBX
Price code: D01

The Federal Occupational and Career Information System (FOCIS) is a PC-based interactive software program developed by the U.S. Office of Personnel Management (OPM) to help federal employees and job seekers to obtain information about Federal careers, occupations, agencies, current job openings, and training. Job seekers use FOCIS for career guidance and for exploring the Federal world of work. Typing, clerical, and an interest tests can be taken on the computer. FOCIS contains a database of information on almost 600 Federal occupations and 500 Federal organizations. Users with modems can dial into an OPM bulletin board, electronically transfer current job vacancy listings to their computer, and search for job openings using FOCIS. Federal employees can use FOCIS to access information on more than one thousand nationwide training courses.

Specifications: The software is on eleven 3 1/2 inch diskettes, 720K double density. Documentation included; may be ordered separately as PB93-134864. System: IBM-PC or compatible; PC-DOS 3.0 or higher operating system, 400K. Hard disk requires 2.5 to 12.7 Mb depending on the combination of modules installed. Language: dBase III plus compiled in Clipper. Drive should be a 286 or higher processor.

Compressed Version 4.0-IBM 3 1/2 inch 1.44Mb

Order number PB93-502557CBX
Price code: D01

Specifications: The software is on three 3 1/2 inch diskettes, 1.44M high density.

Compressed Version 4.0-IBM 5 1/4 inch 1.2Mb

Order number PB93-502540CBX
Price code: D01

Specifications: The software is on three 5 1/4 inch diskettes, 1.2M high density.

Compressed Version 4.0-IBM 5 1/4 inch 360K

Order number PB93-502524CBX
Price code: D01

Specifications: The software is on eleven 5 1/4 inch diskettes, 360K double density.

AERODYNAMICS & FLUID MECHANICS

Computer Aided Load Manifesting (CALM)

Department of Defense

Program Code
Order number PB90-502402CBX
Price code: D04

Source Code
Order number PB90-502394CBX
Price code: D10

The Computer Aided Load Manifesting (CALM) program is designed to provide load planning personnel with automated production of mobility load planning documents, replacing the manual system. It is used to preplan aircraft loads and, during actual deployments, build aircraft load plans used for marshaling, loading, and cargo/personnel manifesting. The system uses high resolution graphics coupled with user-friendly menus to guide a load planner easily through otherwise difficult and time-consuming aircraft load planning. CALM also provides the capability to maintain and retrieve equipment and characteristics which must be considered when load planning cargo and passengers. Version 5.0 was released on December 1, 1989. This version includes the capability to load plan C-130, C-141, C-5 and KC-10 aircraft and to interface with COMPES receiving data files from that system.

CAUTION: CALM should only be used by personnel who have attended the Military Airlift Command Airlift Planner's Course or by personnel who are otherwise qualified to load plan an aircraft.

Specifications: **Diskette.** The software is on five 5 1/4 inch diskettes, 360K double density. Documentation included; may be ordered separately as PB90-215195. System: IBM/PC Compatible; DOS 3.0 or later operating system, 640K. Language: C.Requires hard disk and graphics system software (GSS-Drivers).

AGRICULTURE & FOOD

ERRC Food Process Simulator

Department of Agriculture, Foreign Agricultural Service

Order number PB91-505248CBX
Price code: D99

The ERRC Process Simulator is a computer program which contains the methodology for simulating food processes. In its present form it is tailored specifically to the potato flake process because the models were developed for the unit operations in this process. However, most of these unit operations apply to processing in general . To apply the program to other food processes, you must have models, theoretical or empirical, for the pertinent unit operations not included here.

Specifications: The software is on three 360K 5 1/4 inch diskettes, double density. File format: ASCII. System: IBM PC AT/XT; DOS 3.0 operating system, 640K. Language: Microsoft FORTRAN4.1. A math coprocessor is required.

ATMOSPHERIC SCIENCES & ASTRONOMY

◆ Astrodynamic CAI Software

Department of Defense, Air Force

Order number AD-M000 073CBX
Price code: D04

A library of routines to solve various Astrodynamic problems is presented. Rigorous documentation and coding discipline was used during the development of these routines. Disk 1 contains PASCAL source code. Disk 2 contains FORTRAN source code, and Disk 3 contains a ground track program written using the libraries. The computer files are shown in hardcopy in the technical report. Information on the current version of the software may be obtained from the author.

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Specifications: The software is on three 5 1/4 inch diskettes, 360K double density. File format: Pascal and Fortran Source code. The diskette(s) are in ASCII format. Documentation included; may be ordered separately as AD-A239662. System: IBM compatible; MS DOS Executable Code operating system.

INPUFF (Model-Simulation)

Environmental Protection Agency

Order number PB90-500752CBX
Price code: D01

Program primarily designed to model a single event during which one meteorological transition period may occur, such as going from afternoon to evening conditions. Up to 144 separate meteorological periods of the same length may be used to characterize the meteorology during the event; this provides a time resolution that ranges from minutes to an hour. The user has the option of specifying the wind field for each meteorological period at up to 100 grid locations or allowing the model to default to a homogeneous wind field.

Specifications: The software is on one 360K 5 1/4 inch diskette, double density. System: IBM-PC or compatible. Language: FORTRAN. ready for uploading to an IBM 3090.

✱ ◆ MICA. Interactive Astronomical Almanac

Department of the Navy, U.S. Naval Observatory

DOS Version
Order number PB93-500163CBX
Price: $55
Macintosh Version
Order number PB93-500155CBX
Price: $55

This easy-to-use source of high-precision astronomical data is the tool astronomers use when pretty sky maps aren't enough. MICA, the Multiyear Interactive Computer Almanac, is a software system that provides high-precision astronomical data in tabular form for a wide variety of objects. Designed for professional applications, MICA calculates, in real-time, much of the information tabulated in the benchmark annual U.S. Naval Observatory publication, The Astronomical Almanac. However, MICA goes beyond traditional almanacs by enabling you to calculate data for user-specified locations at user-specified times within a ten-year interval (1990-1999). Both DOS and Macintosh versions reflect the latest thinking about how users and almanacs interact.

WHERE IS MICA NEEDED?
MICA provides essential data for use in: Astronomy and astrophysics; Space science; Geodesy and surveying; Geophysics; Meteorology; Environmental science; Operations planning; Accident reconstruction and litigation; Illumination engineering; Architecture; Photography

WHAT TYPES OF INFORMATION CAN MICA PROVIDE?
Nine types of positions of celestial objects, including geocentric and topocentric apparent places, astrometric places, and topocentric horizon coordinates; Time and Earth orientation data, including sidereal time, nutation components, and obliquity of the ecliptic; Times of rise, set, and transit of celestial objects, and times of civil, nautical, and astronomical twilight; Data on the apparent size, illumination, and orientation of the Sun, Moon, and major planets for telescopic observations; A summary of the configuration of the Sun, Moon, and major planets at user-specified times.

KEY FEATURES: High Precision and Benchmark Accuracy; Ten-year solar system ephemeris (the Jet Propulsion Laboratory's DE200/LE200); Tables in either TDT or UT1 time scales, with either civil or Julian dates; Rise & Set calculations for any object in any time zone; Catalog of the 21 brightest stars and Polaris; Five additional catalogs of astronomical objects: bright stars, FK5, Messier objects, astrometric radio sources, and navigation stars; The ability to access specialized catalogs created by the user; A comprehensive User's Guide with an explanatory chapter on modern astronomical calculations.

The DOS version of MICA features an easy-to-use menu-driven interface. The Macintosh version offers a full-featured Macintosh graphical user interface.

DOS Specifications: **Diskette.** Both 5 1/4 inch, 360K (6 diskettes) and 3 1/2 inch, 720K (3 diskettes) are provided. System: IBM PC or campatible; Memory: 512K. Processor clock speed of at least 8 MHz. At least 512K of RAM. Hard disk drive with 2 MB of free space. Math coprocessor highly recommended.

MacIntosh Specifications: **Diskette.** The datafile is on four 3 1/2 inch diskettes, 800K double density. System: Apple Macintosh; Memory: 1MB. Macintosh Plus or higher. System 6.0.2 or higher (compatible with System 7. Hard disk drive with 2MB of free space. Systems with 68020 or higher processor and math coprocessor highly recommended. MacApp© Object Code.

✱ ◆ SYNOP (Synoptic Rainfall Data Analysis Program)

Department of Transportation, Federal Highway Administration

Order number See below for each format
Price code: D02

SYNOP (SYNOPtic Rainfall Data Analysis Program) and subsidiary program SYNPREP provide the user with tools for summarizing and statistically analyzing a long-term rainfall record of interest. SYNOP analyzes hourly precipitation data available from the National Climatic Data Center (NCDC). SYNOP provides as output a summary of storm event data and the statistics of the descriptive storm parameters, including duration, intensity, volume, and time between storm midpoints by month and year for the entire period of record. SYNOP also provides a correlation matrix between each of the descriptive storm parameters. Return period and probability data are also available as output options. For each year, the storm event summary output by SYNOP includes starting time, duration, volume, intensity, time since the last storm ended, and antecedent rainfall for each storm in the record. The rainfall statistics can be analyzed for various time periods within the data set.

Another option available in SYNOP is the ability to be able to define a minimum allowable storm event volume for analysis. This option lets the user remove from the analysis storm events whose total volume is less than a user specified minimum volume. This is particularly useful for rainfall-runoff analysis.

Specifications: Ordering information for each format: (A) 3 1/2, DD,executable code for Macintosh (order number PB93-505261), (B) 3 1/2, HD, Executable code for IBM (order number PB93-505279), (C) 3 1/2, HD, Source Code for IBM (order number PB93-505287). All formats are the same price. System: IBM compatible; MS DOS operating system. A math coprocessor is required for this program.

◆ Systematic Acquisition Requirements Tailoring and Scheduling (SMARTS) (Version 2.1)

Department of Defense

Order number PB92-501048CBX
Price code: D05

The Systematic Acquisition Requirements Tailoring and Scheduling System (SMARTS) is a personal computer based, menu driven system that streamlines the process of developing Procurement Requests (PRs), Statements of Work (SOWs), and Contract Data Requirements Lists (CDRLs). The system was originally designed to be ass tool for the Naval Sea Systems Command (NAVSEA); however, SMARTS is based on Department of Defense standards, thus making it suitable for other DoD and industry acquisition organizations as well. A complete review and update of SMARTS takes place every six months which insures that SMARTS remains up-to-date with changes to source documents that affect the procurement process. Version 2.1 of the program has full global tailoring.

Specifications: The software is on nine 5 1/4 inch diskettes, 360K double density. Documentation included; may be ordered separately as PB92-120906. System: IBM PC or Compatible AT ; MS DOS 3.10 operating system, 512K. Language: C. Hard disk drive with sufficent storage space for 9.5MB and 1.8MB for each PR package created and an HP laser printer (or compatible) with a 'T'(Tax 1) and 'V' (Forms Landscape font cartridges or a megacartridge containing both font sets. Software also requires DOS 3.10 or later, Word Perfect 5.0 (rel. date 4/29/89) or 5.1. Form Worx with Fill and File (ver 2.550) or 2.56, and DocuComp (version 1.11) or DocuComp II.

WINDROSE

Department of Interior

Order number PB89-167415CBX
Price code: D01

This program can be used to help analyze wind data and generate graphic summaries for reports. The program was developed by the Alaska Field Operations Section of the Minerals Management Service to read an ASCII file containing wind direction and magnitude information, perform a statistical analysis of the data, and produce a wind summary.The wind summary can be displayed in a graphic mode as a windrose or in tabular form.

Specifications: The software is on one 360K 5 1/4 inch diskette, double density. File format: ASCII text. Documentation included; may be ordered separately as PB89-167423. System: IBM-PC or compatible ; MS-DOS operating system, 360K. Language: BASIC.

BIOLOGICAL SCIENCES

◆ Insect Version 1.0

Department of Defense

Order number AD-M000 210CBX
Price code: D02

INSECT is a simulation that includes interaction between water hyacinth plant growth and two types of Neochetina weevils. The INSECT software package includes four major components and features a series of program menus that help guide the user through the INSECT software package.

Specifications: The software is on one 3 1/2 inch diskette, 1.44M high density. Documentation included; may be ordered separately as AD-A261 633. System: IBM compatible; MS DOS operating system. Requires a math coprocessor and a minimum of 260 (KB) of free RAM.

Minnesota Wetland Evaluation Methodology for the North Central United States

Department of Defense

Order number AD-A205 474CBX
Price code: D01

The art of evaluating the functions and values of wetlands is relatively new. Traditionally wetlands have been recognized for their value as wildlife habitat. However, since the mid-1970's, other wetland functions and values (e.g. floodwater storage, water quality improvement) have become increasingly important in the wetland evaluation decision-making process. The purpose of this wetland evaluation methodology is to provide a standard procedure to assist the professional in rapidly evaluating the many functions, values, and characteristics of wetlands.

Specifications: The software is on one 360K 5 1/4 inch diskette, double density. System: IBM-PC or compatible; MS-DOS operating system, 360K. Language: FORTRAN. Math coprocessor chip is required to compute the inflow-outflow hydrographs for the flood flows section.

◆ Statistical Approach to Predicting Chronic Toxicity of Chemicals to Fishes from Acute Toxicity Test Data

Environmental Protection Agency

Order number PB92-503119CBX
Price code: D02

A methodology was developed to predict chronic toxicity based on acute data. This method is called Multifactor Probit Analysis (MPA) and uses the iteractive reweighed least squares method to estimate parameters of the probit surface. The independent variables are time of exposure and probit of the proportion responding to a concentration. MPA allows the user to predict the concentration of toxicant at any time and percent mortality, LC t,p. MPA calculates a point estimate and a measure of dispersion (95% Confidence limits). The MPA is versatile, entirely menu-driven and offers 7 probit models and transformation combinations of the independent variables

Specifications: The software is on one 5 1/4 inch diskette, 360K double density. File format: ASCII. Documentation included; may be ordered separately as PB92-169655. System: IBM PS2 Model 50; DOS 4.0 operating system, 640K. Language: True BASIC.

BUILDING TECHNOLOGY

◆ Building Life Cycle Cost Computer Program (BLCC) Version 3.2

Department of Commerce, National Institute of Standards and Technology

Order number PB93-502995CBX
Price code: D02

Building Life Cycle Cost Computer Program (BLCC) 3.2 is an economic analysis software package for evaluating investments in building and building systems which reduce their long-term operating costs. It is especially useful for evaluating the costs and savings of energy conservation projects in buildings. BLCC computes life-cycle costs, savings-to-investment ratio, net savings, internal rate of return, and cash flow analysis for project alternatives. It is appropriate for Federal and private sector use, as well as for state and local governments.Included on the BLCC diskette is a stand-alone program called DISCOUNT 3.2. It computes present values of future amounts and periodic amounts, and annual-value equivalents of present and future amounts. This updated version contains the energy price escalation rates and discount rate that applies to federal building analysis in FY 1993 and includes several minor improvements in the user interface.

Specifications: The software is on two 5 1/4 inch diskettes, 360K double density. Documentation included; may be ordered separately as PB91-159764. BLCC User's GUide is included on the BLCC program diskette.

HAZARD I Fire Hazard Assessment Method

Department of Commerce, National Institute of Standards and Technology

Order number PB92-500420CBX
Price: $250

This program predicts the hazards to occupants involved in a building fire. It consists of modules which can predict the time-varying environment within a building resulting for a specified group of occupants as they interact with the building, the fire, and each other. It also analyzes the impact of the exposure of each of the occupants to the fire products in terms of whether the occupants sucessfully escape, are incapacitated, or killed.

Specifications: The software is on six 5 1/4 inch and three 3 1/2 inch diskettes, 360K and 720K double density. System: IBM PC XT/AT/PS2 or compatible; MS DOS 3.0+ operating system, 640K. Language: FORTRAN/ BASIC Assemb. A math coprocessor 8087,80287 or 80387 and a 2Mb hard disk drive are required.

National Fire Incident Report System Version 4.0

Federal Emergency Management Administration

Order number PB88-164553CBX
Price: $300

FEMA's U.S. Fire Administration (USFA) established the NFIRS for the collection of fire incident and fire casualty data on a nationwide basis. NFIRS is an integral part of the Fire Administration's program which has one of its primary goals, assisting state and local governments and other critical groups in the development of their own fire data systems, and in the use and interpretation of their data. NFIRS contributes to the second major goal of the Fire Administration, as well; this is to determine the magnitude and characteristics of the U.S. fire problem in sufficient detail and accuracy to guide fire protection decisions at various levels of government and the private sector, and help identify solutions to

the problems identified. This software package includes the implementation of many recommendations from the National Fire Information Council including the latest improvement of Hazardous Materials Incident Reporting. Version 4.1 has the additional capability of maintaining the special Hazmat record types. The package consists of over 50,000 lines of source code.

Specifications: The software is on 16 360K 5 1/4 inch diskettes, double density. System: IBM-PC/XT or compatible ; MS-DOS 2.1 operating system, 120K. Language: COBOL. Hard disk required; paralled port printer with 132 character print line.

Risk Assessment Matrix (RAM)

General Services Administration, Office of Small and Disadvantaged Business Utilization

Order number PB89-159362CBX
Price code: D01

In determining the level of security services for a building, the most significant common denominator is RISK. Surveys must identify and consider any possible risk factors which might impact upon the security of a building, its tenants, and/or contents. Characteristics of occupant agencies is also a critical factor (i.e., whether agencies perform missions involving national intelligence operations or other activities and/or other materials critical to the national interest; activities of an essential governmental nature; or, activity (both historical and potential) associated with a building were found to be key indicators for determining the level of risk associated with security requirements. Utilizing these factors and available office automation spreadsheet software, a consistent and accurate method of analyzing security needs is possible. Point values are assigned to the various threat and vulnerability levels associated with each key variable, and entered in the spreadsheet. An algorithm is applied to calculate risk levels associated to the characteristics of the building, resulting in the generation of two reports: A graphic risk assessment matrix with recommended countermeasures, and a cost summary document detailing costs for the recommended countermeasures. It aids in identifying threats, (both actual and potential), determining vulnerabilities, anticipating both the probability and severity of a risk, and recommending appropriate countermeasures. Final results are portrayed in a standardized Risk Assessment Matrix report format which is easily read, concise, and understandable by those who might be unfamiliar with physical security. This makes it particularly valuable to service recipient, managers, and others not directly involved with security, but who are vitally concerned with its application.

Specifications: The software is on one 360K 5 1/4 inch diskette, double density. Documentation included; may be ordered separately as PB89-159370. System: IBM-PC/XT or compatible ; MS DOS/HRAM.WK1/RAM.WK1 operating system, 360K. Language: Lotus 1-2-3.

Zip-Code Insulation Program (ZIP)

Department of Commerce, National Institute of Standards and Technology

Order number PB91-507681CBX
Price code: D02

Zip 2.0 (the ZIP Code Insulation Program) is a computer program developed to support the Department of Energy's 'Insulation Fact Sheet' by providing users with customized estimates of economic levels of residential insulation for any location in the United States, keyed to the first three digits of its Zip Code. It currently calculates economic levels of insulation for attic floors, exterior wood-frame and masonry walls, floors over unheated areas, slab floors, and basement and crawlspace walls, ductwork in unconditioned spaces, and water heaters. Site-specific estimates can be made for any location in the United States by entering the first three digits of its ZIP Code. Climate parameters are contained in a file on the ZIP diskette and automatically retrieved when the program is run. The user must designate the type of heating and cooling equipment present in the house. Default energy and insulation price data are also retrieved from the ZIP diskette, but these can be overridden to correspond to local prices. A comprehensive report is displayed with the economic R-values, advisory material, and a list of the user's input assumptions. An economic analysis can be conducted for either new or existing houses. Climate parameters are contained in a file and automatically retrieved when the program is run. Regional energy and insulation price data are also retrieved but these can be overridden to more closely correspond to local prices. Program can be run for a single Zip Code and specified heating and cooling system. It can also be run in a 'batch' mode for any number of consecutive Zip Codes in order to provide a table of economic insulation levels for use at the state or national level.

Specifications: The software is on one 360K 5 1/4 inch diskette, double density. Documentation included; may be ordered separately as PB91-167155. System: COMPAQ Portable II or compatible; MS DOS operating system, 360K. Language: Basic.

BUSINESS & TRADE

✱ ◆ AnyPIA - (Primary Insurance Amount) - A Program to Estimate Social Security Monthly Benefit Payments (version 1993.1) (3 1/2 inch diskette version, 720K)

Department of Health and Human Services

Order number PB93-500593CBX
Price code: D01

Specifications: The software is on one 3 1/2 inch diskette, 720K double density. File format: Executable code only. Documentation included; may be ordered separately as PB93-111714. System: IBM-PC; MS DOS operating system, 256K. Language: C programming.

5 1/4 inch diskette version, 360K

Order number PB93-500585CBX
Price code: D01

Specifications: The software is on one 5 1/4 inch diskette, 360K double density. File format: ASCII. Documentation included; may be ordered separately as PB93-111714. System: IBM-PC; MS DOS operating system, 256K. Language: C programming.

* Automan 2.0: Decision Support Software for Automated Manufacturing Investments (3 1/2 inch)

Department of Commerce, National Institute of Standards and Technology

Order number PB91-507194CBX
Price code: D01

Automan, microcomputer program designed to support multi-criteria decisions about automated manufacturing investments. The program permits users to combine quantitative and qualitative criteria in evaluating investment alternative. Quantitative criteria could include such traditional financial measures as Life-Cycle Cost and Net Present Value as well as such engineering performance measures as throughput and setup time. Qualitative criteria could include flexibility and product quality. First, the user specifies the evaluation criteria and the investment alternatives to be evaluated. Second, the user makes pairwise comparisons between criteria. The pairwise comparison process helps the user rate the qualitative criteria. Automan combines ratings with criteria weights into an overall rating for each investment alternative and then ranks alternatives. Finally, graphical sensitivity analysis can be constructed to visualize the overall ratings of every alternative for every possible weight that could be assigned to any criterion. Automan comes with sample decision models and a manual that includes a detailed tutorial, a glossary of evaluation criteria, a bibliography, and an index.

Specifications: **Diskette.** The software is on one 3 1/2 inch diskette, 720K double density. Documentation included; may be ordered separately as PB91-167700. System: Intel 8011/286/386; MS-DOS 2.1 or higher operating system, 640K. Language: Clipper and C. Requires a microcomputer with one 3 1/2 inch 720 kilobyte diskette drive.

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* Automan 2.0: Decision Support Software for Automated Manufacturing Investments (5 1/4 inch)

Department of Commerce, National Institute of Standards and Technology

Order number PB91-506568CBX
Price code: D01

Specifications: The software is on one 360K 5 1/4 inch diskette, double density. Documentation included; may be ordered separately as PB9l-167700. System: Intel 8011/286/386; MS-DOS 2.1 or higher operating system, 640K. Language: Clipper and C. Requires a microcomputer with one 5 1/4 inch 360 kilobyte floppy diskette drive.

Cashflow Sensitivity Analysis/ Lotus 1-2-3

Department of Commerce, National Technical Information Service

Order number PB85-184018CBX
Price: $46

Businesses now are able to calculate return on investment (ROI) and profitability to evaluate their sensitivity to specific business factors. New software using Lotus 1-2-3 lets businesses and entrepreneurs ask 'what if' questions about the effect of incremental changes in cost and market factors on the performance of business operations. Graphs are developed presenting sensitivity curves for the various input factors. Using the popular Lotus 1-2-3 spreadsheet, the two models assist in business planning. One model determines the rate of return on invested capital in a new project or business. The other determines the sensitivity of profitability for established business operations. For both models, the time period is five years, and up to two product lines or services can be input. The results are based on generated cash flow schedules. For example, a business can input such costs as those for materials and labor, capital investments, indirect costs, depreciation, and tax rate. The software will show the effects that changes in these factors will have on rate of return or profitability.

Specifications: The software is on one 5 1/4 inch diskette, 360K double density. System: IBM-PC or compatible; Memory: 512K. Language: Lotus 1-2-3. Two disk drives, and Lotus 1-2-3.

◆ COBRA-The Base Closing Model

Department of Defense

Order number AD-M000 040CBX
Price code: D02

This report presents the assumptions and calculations used in the COBRA model. That model was used by the Defense Secretary's Commission on Base Realignments and Closures to evaluate the economic feasibility of alternatives scenarios. The model considers on-time and recurring costs in determining the payback period for each scenario. The model has been updated to include enhanced features and to address definitional issues at the request of the General Accounting Office. LMI recommends that this model be used as a reference point in future DoD or Service estimates of realignment and closure costs.

Specifications: The software is on two 5 1/4 inch diskettes, double density. Documentation included; may be ordered separately as AD-A219 009. System: MS DOS 2.0 operating system.

◆ Export to Win

Department of Commerce

Order number PB89-780035CBX
Price: $60

This computer based training software package presents detailed information on export marketing and the exporting process. It's designed as a training aid to be used in educating potential exporters, export counselors, students, and small and medium-sized firms. The program has four levels of tutorial interaction, providing the user with:

- an orientation to the multiple areas and tasks in exporting
- an understanding of specialized terms and regulations
- familiarity with various forms used in international transactions
- a reference guide to other sources of information

The program covers a wide range of pertinent subject areas, including Trade shows, pricing, financing, licensing, shipping, insurance, marketing, distribution network, currency exchange, product development and global strategies.

Specifications: The software is on three 5 1/4 inch diskettes, 360K double density. The diskette(s) are in ASCII format. System: IBM-PC/AT/XT or compatible; MS DOS 2.0+ operating system, 640K. Language: C. A color monitor greatly enhances its visual image.

Forms, Issuances & Publications System

Department of Housing and Urban Development

Order number PB88-216445CBX
Price: $60

The system maintains inventory balances, validates requisitions, alerts users to the need for stock replenishment, reports on warehouse activity and tracks the status of orders.

Specifications: The software is on three 5 1/4 inch diskettes, double density. System: IBM PC or compatible.

Furniture and Equipment Management System (FEMIS)

Department of Housing and Urban Development

Order number PB88-216460CBX
Price: $55

System uses bar code readers as an input device. It inventories and tracks personal property and equipment throughout the Department. It controls personal property by reflecting the physical location of each item, the acquisition value depreciation, maintenance costs and other related accounting information. It also provides year-end reconciliation of property and accounting data.

Specifications: The software is on two 360K 5 1/4 inch diskettes, double density. File format: dBase III Plus. System: IBM-PC or compatible; MS-DOS 2.11or 3.1 operating system, 512K. Language: BASIC.

◆ Heating Plant Options Economic Analysis System (HPECON)

Department of Defense

Order number PB92-501782CBX
Price code: D04

HPECON is a PC-based software system that esitmates the economic feasibility of alternative heating plant technologies. This system requires minimum input and offers its users insight into the justifiability of more costly analyses. It also compares technologies in terms of their capital costs, annual operating costs, and life-cycle costs. The system considers coal, oil, natural gas, and wood technologies for plant sized from 5 to 150 MBtu/hr.

The system is divided into four primary programs: (1) HPDATA, (2) HEATLOAD, (3) HPCALC, and (4) LCCID. Also included are two other programs that offer system administrator functions to authorized individuals: HPCREATE and HLCREATE. HPECON contains the software necessary to install and run on either a two-floppy or hard-disk system.

Specifications: The software is on six 5 1/4 inch diskettes, 360K double density. Documentation included; may be ordered separately as ADA234030. System: IBM Compatible; MS DOS 3.3 or later operating system, 640K. Language: Compiled PASCAL.

International Trade Information System: Japan, Taiwan, South Korea, Hong Kong, Singapore (5 1/4' 1.2M)

Department of Agriculture, Foreign Agricultural Service

Order number PB91-509703CBX
Price: $95

ITIS provides agricultural exporters and would-be exporters basics about five Asian nations-Japan, Taiwan, South Korea, Hong Kong, and Singapore. The information includes and overview of each country as well as information on agricultural policy, production, and consumption, imports from the world and the U.S., tariff and other trade barriers, export opportunities, and consumption patterns.

ITIS is an information system which integrates relevant information and packages it into an easily understandable and usable form. It is designed to provide basic infomration to help exporters identify trends in consumption and export opportunities. ITIS, however, is not an on-line system designed to provide up-to-the-minute market information. For example, the system will not tell you the price of tea in china one hour ago. It will give exporters background information and therefore allow them to better utilize current market information sources. ITIS can be used as a training tool for exporters and would-be exporters.

Specifications: **Diskette.** The software is on four 5 1/4 inch diskettes, 1.2M high density. Documentation included; may be ordered separately as PB91-219824. System: IBM 386 P-70; DOS 3.3 + operating system.

International Trade Information System: Japan, Taiwan, South Korea, Hong Kong, Singapore (3 1/2', 1.44M)

Department of Agriculture, Foreign Agricultural Service

Order number PB91-509695CBX
Price: $95

Specifications: The software is on three 3 1/2 inch diskettes, 1.44M high density. Documentation included; may be ordered separately as PB91-219824. System: IBM 386 P-70; DOS 3.3 + operating system.

◆ PCMINSIM: Discounted Cash Flow Rate of Return (DCFROR)

Department of Interior

Order number PB92-501014CBX
Price code: D02

A MINe SIMulator model is used by the Bureau of Mines to evaluate the economics of a mineral recovery operation. This document explains the computations performed in this discounted cash flow rate-of-return (DCFROR) procedure and the use of a LOTUS 1-2-3 (R)2 template version (PCMINSIM) of this model.

A MINSIM evaluation combines reserve tonnage and grad estimates and the associated capital and operating costs with information about financial and tax conditions to simulate the DCFROR that can be expected over the life of the mine. Solution options include the Net Present Value (NPV) of the property, the average total production cost over the life of the operation, or the after-tax rate of return expected at an assumed selling price for the marketable product.

Running PCMINSIM is simplified by 11 tiered-menus which direct the user through the evaluation process. The main contribution of the PCMINSIM is the sue of automated spreadsheet technology to illuminate the relationships inherent in a DCFROR evaluation, to expedite interactive sensitivity analysis, and to facilitate modifications to explore new applications of this property evaluation tool.

Specifications: The software is on one 5 1/4 inch diskette, 360K double density. File format: Lotus 1-2-3. Documentation included; may be ordered separately as PB92-120898. System: IBM compatible PC; MS DOS 3.0 or higher operating system, 640K. Language: LOTUS 1-2-3.

◆ Pdwriter (Position Description Writer), Version 4.0

Department of Defense

Order number AD-M000 095CBX
Price code: D04

Pdwriter assists individuals who write and classify position and job descriptions. The system consists of a computer program which allows the user to choose menu statements keyed to a particular type of work. Based upon the user's selections, the program builds a description which contains duty statements and required factor statements. Descriptions may be viewed and revised; saved as data files for later revision within Pdwriter; saved as text files for editing in a word processor; and printed on a dot-matrix or laser printer. Knowledges, Skills and Abilities (KSAs) may be created with the PDwriter system for use in a vacancy announcement. In most cases PDwriter will evaluate and classify the position, pint out potential inconsistencies, and identify position management problems. The system is designed to be used as a tool by anyone who needs to classify or describe a position. No special computer knowledges are required. Though on-line help screens are available, most users will find Pdwriter to be intuitive and easy to use.The program may be run on a stand-alone personal computer or on a local area network file server.

Specifications: The software is on eight 5 1/4 inch diskettes, 360K double density. Documentation included; may be ordered separately as AD A242 909. System: IBM compatible; MS DOS 2.0 and higher operating system.

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CHEMISTRY

◆ SEMEX - A Program to Extract Particle Size From Scanning Electron Microscope Images

Department of Defense

Order number AD-M000 110CBX
Price code: D02

Accurate measurement of particle size distribution of rocket motor exhausts is essential for predicting the combusion efficiency and infrared plume signature. This program presents an automated method for extracting particle size distribution from scanning electron microscope (SEM) images. The SEM images were taken off a filter paper placed at the end of a collection probe inserted into the exhaust plume.

Specifications: The software is on one 3 1/2 inch diskette, 1.44M high density. Documentation included; may be ordered separately as AD-A242 700. System: IBM compatible; MS DOS operating system. Hardware: IBM AT with 386/AT accelerator board, EGA Monitor, PCVISIONplus frame grabber board, Panasonic Camera and light table, Panasonic monochrome monitor,Tektronix video copy processor, Bernoulli Box II and LaserJet printer (optional). Software:Microsoft C, Window Boss, ITEX PCplus and MATLAB386.

CIVIL & STRUCTURAL ENGINEERING

◆ Boring Log Design File Builder, Version 2.01

Department of Defense

Order number AD-M000 138CBX
Price code: D02

The U.S. Army Engineer Waterways Experiment Station (WES) contracted with Nash Computing Services (NCS) to modify and enhance the Boring Log Design File Builder (BP), a PC-based Micro Station utility for creating boring log design files. The initial version of BP had several shortcomings that have been rectified in the new release. These include memory requirements, configurability, and conformance to Corps standards regarding plate size, cell library, symbology, and scaling.

Specifications: The software is on one 5 1/4 inch diskette, 1.6Mb double density. File format: ASCII. Documentation included; may be ordered separately as AD-A252 913. System: IBM PC compatible or UNIX; Intergraph/Microstation Ver 3.3 operating system. Language: dBase III.

◆ HNCFRAME version 1.0

Department of Defense

Order number AD-M000 053CBX
Price code: D02

HNCFRAME is a structural analysis program designed to analyze two- and three-dimensional truss and frame structures. The program only considers static loads and static loads due to temperature changes.

Specifications: The software is on one 5 1/4 inch diskette, 360K double density. File format: ASCII . Documentation included; may be ordered separately as AD-A236735. System: MS DOS Compatible; MS DOS 2.1 or higher operating system. This program requires 512K memory and a math coprocessor.

◆ Multilayer User-Friendly Thermal Model in 1 Dimension (MUT1D) (Model-Simulation)

Department of Transportation

Order number PB92-501360CBX
Price code: D01

Multilayer User-Friendly Thermal Model in 1 Dimension (MUT1D) is a microcomputer-based model which uses implicit finite difference techniques to determine the thermal regime in layered material systems. This model allows the surface energy flux or temperature to be specified in several ways. These include specified temperatures, surface n-factors, specified energy flux, specified convection, and a complete surface energy balance making use of short and long-wave radiation, wind speed, cloud cover, and ambient air temperatures. The model tracks the movement of the phase change interface by monitoring the enthalpy in each element of the soil system you are modeling.

MUT1D was developed for use by airport and highway design engineers, maintenance personnel, researchers, and planners. Possible applications include determining freeze or thaw

front penetration in roadway embankments in order for designers to design for minimal thaw degradation or frost heaving. Maintenance personnel may use the model to predict movement of the spring thaw front in the roadway embankment. This will help them select the appropriate steps to protect pavements during periods of thaw weakening in the embankment. Some design problems require analysis to be performed in two dimensions. Under these circumstances it will be necessary to use a model other then MUT1D. However, when a problem is one-dimensional in nature, MUT1D will give results of similar accuracy to most two-dimensional models. This product was also developed as a design tool for engineers to perform geotechnical thermal analysis of foundation systems constructed on seasonally or permanently frozen ground. This type of analysis is normally performed using simple analytical techniques, such as the Modified Berggren method, or the more complex two-dimensional finite element thermal models. MUT1D is designed to bridge the gap between these two techniques.

Specifications: The software is on one 5 1/4 inch diskette, 360K double density. File format: ASCII. Documentation included; may be ordered separately as PB92-139898. System: IBM; MS DOS operating system, 640K. Language: BASIC Executable. A math co-processor will speed operation of the program, but is not necessary for operation of the program.

◆ Prestressed Concrete Beam Design and Analysis (PRESTRES) (Beta Version)

Department of Defense

Order number AD-M000 056CBX
Price code: D02

PRESTRES is a prestressed concrete beam design and analysis program for simply supported beams. The program has been tailored for highway bridge girders; however, with modifications, it can be used to design piers and buildings. The American Association of State Highway and Transportation Officials (AASHTO) and the Prestressed Concrete Institute (PCI) standard bridge beams and design procedures are currently used in the program.

Specifications: The software is on one 5 1/4 inch diskette, 360K double density. File format: ASCII. Documentation included; may be ordered separately as AD-A236 739. System: MS DOS 2.1 or higher operating system. 512K memory and math coprocessor required.

◆ Static Analysis of Framed Structures

Department of Defense

Order number AD-M000 050CBX
Price code: D02

The S7001 general purpose frame analysis computer program can be used to statically analyze continuous beams, plane frame, grids, space truss, and space frame structures that are composed of prismatic elastic members.

Specifications: The software is on one 5 1/4 inch diskette, 360K double density. Documentation included; may be ordered separately as AD-A236 733. System: MS DOS Compatible; MS DOS 2.1 or higher operating system. The nine files have been compressed into one file PK51001.EXE and README file containing instructions for expanding the compressed file. This program requires 512K memory and a math coprocessor.

◆ Static Analysis of Plane Frame and Truss Structures (Version 1)

Department of Defense

Order number AD-M000 054CBX
Price code: D02

S6801 is a plane frame and truss structural analysis program that is limited to static loads. It computes the displacements and the member end actions for each end of each member. The member end actions include the axial and shear forces,and the in-plane moment. The program is unique since the problem is posed with respect to the member. This means the user describes the problem member by member instead of building separate data tables and relating the tables to complete the problem description.

Specifications: The software is on one 5 1/4 inch diskette, 360K double density. File format: ASCII. Documentation included; may be ordered separately as AD-A236 736. System: MS DOS Compatible; MS DOS 2.1 or better operating system. The program is designed to run on a computer having at least 512K memory and a math coprocessor.

◆ Structural Analysis Code Kit (SACK)

Department of Defense

Order number AD-M000 052CBX
Price code: D02

The Structural Analysis Code Kit (SACK) is a collective group of structural computer programs which solve typical problems encountered in analysis and design. The user is expected to be familiar with structural analyses typically found in textbooks or an engineering school curriculum. These programs are free from proprietary limitations and are smaller in scope than large commercial programs. The programs are very simple to use and understand. They will not become obsolete when new building codes are developed and updated, because of the distinct difference between analysis and design. SACK programs aid in the analysis phase of structures and give numerical answers for deflections, moments, shears, and axial loads. The results are used, in turn, to evaluate members in the design phase using current building codes to decide if acceptable member sizes are appropriate and safe.

Specifications: The software is on two 5 1/4 inch diskettes, 1.2M high density. File format: ASCII. Documentation included; may be ordered separately as AD-A236 738. System: MS DOS 2.1 or later operating system, 512K.

Wave Equation Analysis of Pile Driving (WEAP) Program, June 1988

Department of Transportation, Federal Highway Administration

Order number PB90-500240CBX
Price code: D03

Program simulates a foundation pile under the action of an impact pile driving hammer. The program computes:

- The blow count (number of hammer blows/unit length).
- The axial stresses in pile.
- The energy transferred to pile.

Specifications: The software is on four 360K 5 1/4 inch diskettes, double density. System: IBM-PC or compatible; DOS operating system, 360K. Language: FORTRAN. At least two 360k disk drives or one 360k disk drive and a hard disk.

◆ WESHAKE for Personal Computers Version 1.0

Department of Defense

Order number AD-M000 181CBX
Price code: D03

One of the basic problems to be solved by geotechnical engineers in the regions where earthquake hazards exist is to estimate the site-specific dynamic response of a layered soil deposit for ground-level conditions. WESHAKE may be used to accomplish this task. WESHAKE is an adaptation of the original program, SHAKE, written at the University of California at Berkely, by Schnabel, Lysmer, and Seed (1972). WESHAKE is modified by WES to keep pace with the state-of-the-art technology and to provide a user-friendly interface.

Specifications: The software is on one 5 1/4 inch diskette, 1.2M high density. File format: ASCII. Documentation included; may be ordered separately as AD-A258 864 and PB-220207. System: IBM Compatible; MS DOS operating system. Minimum Requirements: 465 Kb of RAM , version 3.1 of DOS, a math coprocessor is mandatory for computers with 8086, 80286, and 80386 processors.

WIC, FEJE, SFI Modules, Version 2.2

Department of Defense

Order number PB91-506659CBX
Price code: D09

This program converts the WIC, FEJE, SFI Modules, version 2.1 to version 2.2. WIC, FEJE, and SFI modules are three of the five modules that compose the Facilities Maintenance/Utilities System of the Public Works Management Automation (PWMA). The other two modules, Emergency/Service (E/S) and Utilities, can be used as stand alone modules, or in conjunction with these three modules to enhance their functionality. The WIC/FEJE/SFI modules must be loaded on the same machine, as they share information (data files). Not all of the modules must be utilized, however. The user can select one, two, or all three of the modules, depending upon the activity needs. The Work Input Control (WIC) Module provides the Facilities Management Engineering Division a tool to effectively control the flow of work to the shops, based upon known availability of resources. WIC is designed to track work to see what has been accomplished, what is currently scheduled, and what has been deferred. When work is scheduled to be performed, a PW control number is assigned and the pertinent information is entered into the WIC module. Dates, organizational codes and remarks can be entered as the job progresses through cost estimating, materials ordering, shop scheduling and in-house accomplishment or contracting phases. When the work has been completed, or a decision is made not to perform the work, the job is transferred to a history file where it can be referenced. The Facilities Engineering Job Estimating Module (FEJE) is an automated method of applying Engineered Performance Standards (EPS) that enables Planners and Estimators to prepare scoping and detailed estimates faster, with more consistency and better quality. The FEJE module contains three submodules' Scope Estimating, Detailed Estimating, and the interface with the Preventative Maintenance and Inspection (PMI) submodule. Use of FEJE will significantly improve EPS utilization. Various studies have shown that proper application of standards results in more productive use of resources. The Department of Defense (DOD) goal for EPS utilization is 75%-very few activities are achieving this goal. This module also supplies you with statistical information concerning work performance. The Shore Facilities Inspection (SFI) Module is an automated inspection management system. It is comprised of two submodules; the Preventative Maintenance Inspection (PMI) Submodule which deals with installed dynamic equipment; and the Controlled Inspection (CI) Submodule which deals with facility inspections. Together, these modules assist the user in keeping their facilities and equipment in good repair. An effective inspection program should avoid more costly repairs in the future.

Specifications: The software is on 16 5 1/4 inch diskettes, 360K double density. Documentation included; may be ordered separately as PB91-151910, PB91-151928, PB91-151936, PB91-151944, PB91-151951, PB91-151969, PB91-151977, PB91-151985 and PB89-196281. System: IBM-PC compatible; MS-DOS 3.1 to 3.3 operating system, 640K. Language: Compiled COBOL. To print reports, 132 column printer is required. If you need to do any file maintenance, you will need to purchase Btrieve 4.10 which includes the necessary B-Util software.

COMMUNICATIONS

Fiber Optic Radiation Attenuation Model (FIBRAM)

Department of Commerce, National Institute of Standards and Technology

Order number PB87-230678CBX
Price: $50

The program is a fiber optics system model for computer implementation. This implementation can calculate the bit error ratio (BER) versus time for optical fibers that have been exposed to gamma radiation. The program is designed so that the user may arbitrarily change any or all of the system input variables and produce separate output calculations. The primary output of the program is a table of the BER as a function of time. This table may be stored on magnetic media and later incorporated into computer graphics programs.Flow charts and program listings are included in the user's manual.

Specifications: The software is on one 5 1/4 inch diskette, double density. System: IBM-PC/XT/AT; MS-DOS operating system, 256K. Language: FORTRAN 77.

✱ ◆ Ionospheric Communications Analysis and Prediction Program (IONCAP) (3 1/2-inch DOS Version)

Department of Commerce, National Telecommunications and Information Administration

Order number PB92-501642CBX
Price code: D03

The computer program is an integrated system of subroutines designed to predict high-frequency (HF) skywave system performance and analyze Ionospheric parameters. These computer-aided predictions may be used in the planning and operation of high-frequency communication system using skywaves. There are 29 task options available in the current version.

Specifications: The software is on one 3 1/2 inch diskette, 1.4M high density. File format: Multiple formats. The diskette(s) are in ASCII format. Documentation included; may be ordered separately as PB84-111210; . System: IBM-XT/PS/ 2; DOS operating system, 512K. Language: FORTRAN.

* ◆ Microcomputer Spectrum Analysis Models (MSAM) Source Code

Department of Commerce, National Telecommunications and Information Administration

Order number PB93-500379CBX
Price code: D02

Program is a collection of 14 radio frequency communications engineering and spectrum management programs plus a menu program. It was written in FORTRAN and C source code. The accompanying documentation includes installation instructions. Note that additional commercial software must be purchased in order to compile and link the programs, including the Microsoft FORTRAN and C compilers, GSS-GKS (™) and GSS-DRIVERS (™) graphics routines and device drivers, and PANEL (™) or PANEL PLUS II (™) screen development routines. Two of the programs optionally may require purchase of a CD-ROM device driver and a USGS CD.

Specifications: The software is on two 5 1/4 inch diskettes, 1.2M high density. Also available without source code (includes Terrain Data Base), PB93-500361. System: IBM compatible; MS DOS operating system, 640K. Language: FORTRAN and C. The files are in EZARC (™) compressed format, with an EZINSTAL (™) install program included (software license not required).

* ◆ Microcomputer Spectrum Analysis Models (MSAM) with Terrain Data Base

Department of Commerce, National Telecommunications and Information Administration

Order number PB93-500361CBX
Price code: D14

Contains a collection of 14 radio frequency communications engineering and spectrum management programs plus a menu program. An associated terrain elevation data base with 30-second data is provided for the U.S. (less Alaska), Hawaii, Puerto Rico, the Caribbean and border areas of Canada and Mexico. The following programs are included.

1. Bearing/Distance Program (BDIST)
2. Satellite Azimuth Program (SATAZ)
3. Intermodulation Program (INTMOD)
4. NLAMBDA-90 smooth -earth propagation program (NL90)
5. Frequency Dependent Rejection program (FDR)
6. ANNEX I program to evaluate frequency proposals per NTIA Manual (ANNEX I)
7. Antenna Field Intensity program (AFI)
8. Personal Computer Plot 2-D graphics program (PCPLT)
9. Profile 4/3 earth terrain elevation plot program (PROFILE)
10. Horizon radio line-of-sight plot program (HORIZON)
11. Single-Emitter Analysis Mode (SEAM)
12. Terrain Integrated Rough-Earth Model (TIREM)
13. Power Density Display Program to produce power contour map (PDDP)
14. Line-of-Sight antenna coverage map program (SHADO)

Specifications: The software is on 13 5 1/4 inch diskettes, 1.2M high density. Documentation included; may be ordered separately as PB93-108330 and PB93-108348. System: IBM compatible; MS DOS operating system, 640K. Language: FORTRAN and C. The files are in EZARC (™) compressed format, with an EZINSTAL (™) install program included (software license not required). Program consists of two separate products. MSAM requires 5MB of hard disk space. The Terrain data base requires 17MB of hard disk space. Most MSAM programs do not require data base. Graphics card and CD-ROM drive optional.

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◆ Microcomputer Spectrum Analysis Models (MSAM), Version 4.0, without Terrain Data Base (Executable Code) (Model-Simulation)

Department of Commerce, National Telecommunications and Information Administration

Order number PB93-505337CBX
Price code: D04

Specifications: The software is on two 5 1/4 inch diskettes, 1.2M high density. Documentation included; may be ordered separately as PB93-108348. The accompanying documentation includes installation instructions. This product consists of the executible programs only, for customers who purchased earlier versions of the program and already have the Terrain Data Base. System: IBM PC-compatible/ 386/486; MS DOS 2.0 or higher operating system, 640K. Language: Fortran and C. The files are in EZARC (™) compressed format, with an EZINSTAL (™) install program included (software license not required).

◆ Super High Frequency (SHF) Link Analysis Model (SLAM)

Department of Defense

Order number AD-M000 001CBX
Price code: D02

The Super High Link (SHL) Analysis Model (SLAM) evaluates ship-to-ship and ship-to-air communication links and determines system margin. The link margin is determined after a user defines the transmitter subsystem, the receiver subsystem, the specified level of system performance, and the propagation channel. The propagation channel incorporates the Engineer's Refractive Effects Prediction System (EREPS) and includes the effects of the evaporation duct. A rain model developed by NASA is also included in the channel.

SLAM provides a detailed discussion of the link equation, the propagation effects, the rain model, and the antenna characteristics. In addition, a detailed explanation of the operation of the SLAM computer program is given. Two communication links are evaluated and these examples are used to demonstrate the computer program's capabilities.

Specifications: The software is on one 5 1/4 inch diskette, 360K double density. Documentation included; may be ordered separately as AD-A225 323. System: IBM Compatible; MS DOS operating system.

Telecommunications Lines Management System (TLMS)

Department of Housing and Urban Development

Order number PB88-216486CBX
Price: $55

Assists users in tracking telephone service requests,verifying the accuracy of billing for service and lines, and maintaining current inventory of telephone lines.

Specifications: The software is on two 5 1/4 inch diskettes, 360K double density. System: IBM PC or compatible operating system. Language: Clipper.

Terrain-Integrated Rough-Earth Model (TIREM) Source Code Version 2.83

Department of Commerce, National Telecommunications and Information Administration

Order number PB91-507772CBX
Price code: D03

The Terrain-Integrated Rough-Earth Model (TIREM) system uses terrain profiles to compute point-to-point radio transmission loss at frequencies between 20 MHZ and 20 GHz. The model considers both ground wave and tropospheric-scatter propagation modes, but does not treat skywave propagation by the ionosphere, and is not intended for near-field conditions. Paths over water use the Bullington smooth-earth model. Options include long-term time-variability statistics for specific climate zones, stepping of parameter values and graphic plotting of the profile.

Specifications: The software is on two 1.2M 5 1/4 inch diskettes, high density. Documentation included; may be ordered separately as PB91-100669. System: IBM PC/AT; MS DOS 3.3+ operating system, 410K. Language: Microsoft Fortran Ve. See also PB91-505081.

✱ ◆ Voice of America Coverage Analysis Program (VOACAP) (3 1/2-inch version)

United States Information Agency, Bureau of Broadcasting

Order number PB93-504637CBX
Price code: D04

The Voice of America Coverage Analysis Program (VOACAP), version 93.04, is a full systems performance prediction program for evaluating the ionospheric channel from 2 to 30 MHz. It is a derivative of the Ionosheric Communications Analysis and Prediction (IONCAP) Program (Version 85.04). As this program was modified for broadcast relay station design and horizontal dipole curtain antenna specification, the name was changed to VOACAP to distinguish it from the National Telecommunications and Information Administration (NTIA) IONCAP program. VOACAP has an interactive input menu which replaces the cumbersome card image format of the addition of three antenna types for broadcast evaluation.

The user of VOACAP should not notice many significant differences between VOACAP and IONCAP output. VOACAP gives a significant difference in signal power and required power gain in about 2 to 5 percent of the frequency-hours. Minor differences of one to three dB occur in up to 12 percent of the cases. One to two percent of the time the most reliable mode is different. The majority of the changes occur for paths greater than 2,500 km and at the higher latitudes. However, differences can be found occasionally on any path. Differences of 3 dB or more tend to be prevalent for path lengths of 7,000 km and greater.

IONCAP occasionally over-predicts the signal power because of repetitive summation of the duplication of modes. IONCAP also consistently tends to under-predict the reliability because the noise power in dBW is artificially increased by truncation before the computation of the signal-to-noise ratio (e.g. -158.9 dBW becomes -158 dBW) For frequencies above the MUF, IONCAP can incorrectly identify the layer making the greatest contribution to the available signal power, thereby significantly under-predicting performance at these frequencies. The VOACAP documentation describes how these and other flaws are corrected.

VOACAP is primarily intended for use in full system design; therefore, the user is cautioned to restrict use of the program to these methods (i.e. Methods 13 to 25). Other methods available in IONCAP have not been verified in VOACAP.

Specifications: **Diskette.** The software is on one 3 1/2 inch diskette, 1.44M high density. Documentation included; may be ordered separately as PB93-155174 and PB93-163103. System: IBM compatible; MS DOS 5.0 or higher operating system. Language: Fortran. 580K of RAM required.

✱ ◆ Voice of America Coverage Analysis Program (VOACAP) (5 1/4-inch version)

United States Information Agency, Bureau of Broadcasting

Order number PB93-504629CBX
Price code: D03

Specifications: **Diskette.** The software is on one 5 1/4 inch diskette, 1.2M high density. Documentation included; may be ordered separately as PB93-155174 and PB93-163103. System: IBM compatible; MS DOS 5.0 or higher operating system. Language: Fortran. 580K RAM required.

COMMUNICATIONS-SPEECH

◆ Code Excited Linear Prediction (CELP), Ver. 3.2

Department of Defense

Order number AD-M000 118CBX
Price code: D02

Supplement to NCS Technical Information Bulletin 92-1. Software diskettes include Fortran and C (US government version 3.2) implementations. Datafile diskettes provide samples of input and processed speech.

Specifications: The software is on three 3 1/2 inch diskettes, 1.44M high density. Documentation included; may be ordered separately as AD-A256 629.

System: IBM compatible; MS DOS operating system. Language: FORTRAN and C.

COMPUTER SCIENCES

◆ Computer Programming and Group Theory

Department of Defense, Air Force

Order number AD-M000 067CBX
Price code: D02

Computer Programming and Group Theory, investigates the use of the personal computer as an aid in the study of Group Theory. Basic mathematical concepts are discussed and details how the the data is translated into a programming langauage. Testing results are outlined using the forty non-isomorphic groups of order three to sixteen.

Specifications: The software is on one 5 1/4 inch diskette, 360K double density. File format: ASCII. Documentation included; may be ordered separately as AD-A225 155. System: IBM PC; PC DOS operating system.

FIPS-SGML (Standard Generalized Markup Language) Parser and Validation Suite

Department of Commerce, National Institute of Standards and Technology

Order number PB87-235115CBX
Price: $125

The Institute for Computer Sciences and Technology (ICST) of the National Bureau of Standards has developed a reference parser which may be used as one tool in evaluating documents conforming to the proposed Federal Information Processing Standard for the Standard Generalized Markup Language. The parser supports an implied SGML declaration as described in DOD-M-SGML as of August 1987. It has been developed and tested on personal computers using the small memory model but porting to other environments should be possible. The validation suite may be used as one tool in evaluating parsers conforming to the proposed FIPS for the Standard Generalized Markup Language.

Specifications: The software is on two 5 1/4 inch diskettes, double density. System: IBM-PC or compatible; MS-DOS operating system, 256K. Language: C.

◆ Flyfitter (Phenomenological fitting Procudure for the Fast Microcomputer) Version 1.0

Department of Defense

Order number AD-M000 057CBX
Price code: D02

Phenomenological fitting is interactive curve fitting. It works on the principle that human logic coupled with a computer's number crunching ability is often more effective than brute-force computer techniques at fitting curves to data. More specifically, it relies on the fact that a curve that appears to fit a set of data usually does fit the data. The program, in its current form, is called FlyFitter because the process of phenomenological fitting reminds one of 'flying' a fit.

Specifications: The software is on one 5 1/4 inch diskette, double density. Documentation included; may be ordered separately as AD-A227168. System: IBM Compatible; MS DOS operating system. Language: Turbo Pascal. Accepted by the U.S. Trident Scholar Committee. System requirements include: 512K RAM, 16 color EGA graphics card with color monitor, Logitech compatible mouse, and 8087,80287 or 80387 math coprocessor.

◆ Geotechnical Application Programs for Computer Aided Design and Drafting Systems (CADD)

Department of Defense

Order number AD-M000 065CBX
Price code: D02

The Geotechnical Application Programs for Computer Aided Design and Drafting Systems is a cell library and matrix menu. The cells used in the matrix menu are those contained in the CADD Standards Manual (EM1110-1-1807). This system offers a quick and easy way to generate geotechnical details such as boring log and pavement details. Instructions for installation, use, and maintenance of these packages are included in the individual units.

Specifications: The software is on two 5 1/4 inch diskettes, 1.2M high density. Documentation included; may be ordered separately as AD-A239 110. System: IBM Compatible; MS DOS 3.2 or higher operating system. Language: Intergraph Microstat. Plotting output device and color monitor are required.

◆ Gray-Scale Linear Mapper (GLM)

Department of Defense

Order number AD-M000 154CBX
Price code: D02

The GLM function is a general purpose image enhancement module that can be rapidly applied to any image to permit the user to enhance any limited range of values with considerable detail by changing the contrast and brightness.

Specifications: The software is on one 5 1/4 inch diskette, 360K double density. Documentation included; may be ordered separately as AD-A254 287. System: MASSCOMP; Unix , Version 4.0A operating system. Language: TAR.

◆ HyperCard Database for the Natural Language Sourcebook

Department of Defense

Order number AD-M000 093CBX
Price code: D01

The Sourcebook Database is an electronic version of the Natural Language Sourcebook, developed in a HyperCard environment to facilitate use of multiple classification schemes. The Sourcebook was a research component in the development of the Artificial Intelligence Measurement System. The Sourcebook is a compilation of 197 processing problems addressed or 'handled' by intelligent computer systems.

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Specifications: The software is on one 3 1/2 inch diskette, 800 double density. Documentation included; may be ordered separately as AD-A233307. System: Macintosh Compatible; System 6 operating system. Language: HyperCard Vers. 1.2. Character Set: Binary Code.

◆ Image 1.49

Department of Health and Human Services, National Institutes of Health

Order number PB93-504868CBX
Price: $100

NIH Image is a public domain image processing and analysis program for the Macintosh. It can acquire, display edit, enhance, analyze, print and animate images. It reads and writes TIFF, PICT, PICS and MacPaint files, providing compatibility with many other applications, including programs for scanning, processing, editing, publishing and analyzing images. It supports many standard image processing functions, including contrast enhancement, density profiling, smoothing, sharpening, edge detection, median filtering, and spatial convolution with user defined kernels up to 63x63. Image also incorporates a Pascal-like macro programming language, providing the ability to automate complex, and frequently repetitive, processing tasks.

Specifications: The software is on one 3 1/2 inch diskette, 1.4M high density. File format: ASCII. Documentation included; may be ordered separately as PB93-163160. System: Apple Macintosh; Memory: 4MB. Language: PASCAL. Image requires a Macintosh with at least 4 MB of memory, but 8MB or more are recommended for working with 3D images. Image directly supports, or is compatible with, large monitors, flatbed scanners, film recorders, graphics tablets, PostScript Laser printers, photo typesetters and color printers.

◆ PSGRAPH- A Plotting Program for PC-HARPO, PROFILE, CONPLT, and EIGEN

Department of Commerce, National Oceanic and Atmospheric Administration

Order number PB92-503549CBX
Price code: D02

A FORTRAN computer program, PSGRAPH, that generates PostScript graphics files and PC-compatible screen graphics. Input for the program is provided by files produced by the PROFILE, CONPLT, and EIGEN programs and the PC version of the HARPO program. The program provides for user-selectable PostScript plotting parameters including text font size, magnification factor and line width of the plots. In addition, a data editing factor allows the user to reduce the size of the output PostScript file while retaining the resolution of the plot. Included is a floppy disk with computer programs and sample cases. Instructions for retrieving PSGRAPH via Internet are also given.

Specifications: The software is on one 5 1/4 inch diskette, 1.2M high density. Documentation included; may be ordered separately as PB92-169911. System: IBM PC or Compatible; DOS 3.0 or Later operating system, 640K. Language: FORTRAN.

◆ Questionnaire Programming Language (QPL) Demonstration Disk, Version 3.1

General Accounting Office

Order number PB92-500297CBX
Price: $15

The Questionnaire Programing Language (QPL) software has been designed to write a Computer Aided Telephone Interview (CATI) program that will run on minimally configured IBM personal computers or compatibles. Typical QPL interviews ask from 150 to 250 questions and take from 20 to 40 minutes to complete on the telephone. The software automatically enforces skip instructions and answer range limitations to assure a clean data set. The CATI program uses current computer-human interface techniques that make it easy to train interviewers. The QPL system of programs provide additional utilities that further simplify and speed the process of analyzing CATI survey data. One key utility is a recorded editor, which makes it easy to correct and print records of telephone interviews or to keypunch handwritten questionnaires. Another utility automatically generates SPSS or SAS programs for the statistical analysis of the survey data. A third utility prints a questionnaire program in a normal questionnaire format; automatically numbering questions, drawing boxes for answers, and printing the record layout. The demonstration disk contains a short introduction to the QPL system of programs and CATI program that GAO used in 1988. Both the source and run-time programs are included, as well as the SPSS and SAS statistical analysis programs that were automatically generated by the system.

Specifications: The software is on one 5 1/4 inch and one 3 1/2 inch diskettes, 1.2M or 1.44Mb double density. System: IBM compatible; MS DOS operating system. Language: 'C'. Requires two floppy disk drives or a hard disk and one floppy drive to run the program. For QPL Version 3.1 see PB92-500289.

◆ Questionnaire Programming Language (QPL) Version 3.1 (Model-Simulation)

General Accounting Office

Order number PB92-500289CBX
Price: $150

Specifications: The software is on one 5 1/4 inch and one 3 1/2 inch diskettes, 1.2M and 1.44M double density. Documentation included; may be ordered separately as PB92-102490 and PB92-102508. System: IBM-PC/XT/AT; MS DOS operating system. Language: 'C'. A hard disk and one high density floppy disk drive is required for operation of this program. Also included is QPL Version 3.1 Update to inform users of the improvements in the software. For demonstration disk, see PB92-500297.

✱ ◆ Statistical Export and Tabulation System (SETS) Designer Kit

Department of Health and Human Services, National Center for Health Statistics

Order number PB92-503309CBX
Prioce: $52

SETS was developed for developers to prepare large read-only databases for distribution incorporating state-of-the-art data access and descriptive statistical interfaces.

This kit provides a cost effective way to design, develop, and analyze and then produce read-only data access systems on CD-ROM's. WORMS, hard drives, or diskettes. This powerful software makes

microdata, formerly accessible only via mainframe systems, available at the PC level. Data systems created by this kit may be directly installed on networks to facilitate access remotely or within large organizations.

SETS offers: Direct access to microdata, Self documenting field and value labels, Complex boolean searching, Ad hoc tabulation using spreadsheet capabilities, Data export to database and statistical software, Context sensitivity help at all levels, and Global search of all documentation.

Data access systems using SETS can include: Up to 200 files each including up to 15,600,000 records, Hierarchical or unweighted records of up to 3,000 characters, Up to 1,500 fields per file, and Records within records.

The kit operates in a full screen mode with pop-up menus and includes more than 40 executable programs unified under a singular designer interface.

SETS was developed the National Center for Health Statistics, tested by statisticians, and acclaimed by university and medical researchers.

Specifications: The software is on five 5 1/4 inch and three 3 1/2 inch diskettes, 1.44M high density. System: IBM compatible; MS DOS 3.31 or higher operating system. At least 20MB of free space on a hard drive. Not recommended to run under Windows.

COMPUTER TOOLS

ADA Compiler Validation Capability: ACVC Version 1.11

Department of Defense

Order number AD-A212 549CBX
Price: $1,000

The program is a suite of tests designed to determine an Ada compiler's conformance to MIL-STD-1815A, the Ada Language Reference Manual (LRM). A new official version of the ACVC is released regularly. Currently an 18 month cycle. Six months prior to the expiration of an ACVC version, a field-test release of the subsequent version is made available for distribution.

Specifications: The software is on 47 diskettes, double density. Documentation included; may be ordered separately as AD-A212 438. System: IBM-PC or compatible; MS-DOS 2.1 + operating system. Language: Ada. The software is formatted with 9 sectors/track using MS-DOS diskettes.

Defense Data Network X.25 DTE Conformance Test Software Link & Network Layers

Department of Defense, Defense Communications Agency

Order number AD-A209 377CBX
Price code: D03

Software provides the capability to test the conformance of a host communications interface with the Department of Defense's Defense Data Network (DDN) X.25 (link and network layers) protocols. The host conformance tests are contained on the three diskettes. The Defense Communications Agency's Circular DCAC 370-P195-5, Defense Data Network Host Interface Qualification Testing-Link and Network Layers, contains the test policy, instructions on hot to conduct the test, and also lists the complete test scenarios in an English language form referred to as 'X' notation. The circular is not part of this software package and is separately available through NTIS. The MS-DOS Chameleon 32 DDN test software may be copied via an IBM PC or compatible clone, but the software properly executes only on the Chameleon 32.

Specifications: The software is on three diskettes, double density. System: Tekelec Chameleon 32 ; MS-DOS operating system, 720K. Language: Chameleon Basic. Software for earlier model Tekelec Chameleons may be obtained by contacting the Defense Communications Agency, Code B670, at (703) 385-5337..

* MUMPS Validation Suite, Version 7.61, 1991

Department of Commerce, National Institute of Standards and Technology, Software Standards Validation Gr

Order number PB91-507707CBX
Price:$1,500

Specifications: The software is on two 5 1/4 inch diskettes, 1.2M high density. The diskette(s) are in ASCII format. Documentation included; may be ordered separately as PB91-193185. System: IBM PC or compatible; MS DOS 3.0 or higher operating system. Language: MUMPS.

* ◆ Statistical Process Control Software, (SPC) Version 1.2

Department of Defense

Order number PB93-502516CBX
Price code: D01

This user friendly software automates the statistical and graphical tools used in statistical process control, process improvement, and process metrics analysis. SPC contains an integrated word processor and features an on-line user's manual and extensive help screens. It is a generic tool whose use is not limited to a particular area of application or Federal agency.

SPC is currently being used by academia, industry, and the Federal government. It is functionally comparable to commercial packages, more user-friendly, and less expensive.

The software tools provided include: Run Chart, XMR Chart, XBar-R Chart, XBar-S Chart, PN Chart, P Chart, C Chart, U Chart, Bar Graph, Pareto Diagram, Pie Chart, Histogram, Frequency Polygon, Ogive (CDF), Scatter Program. Regression and capability statistics can be prepared along with expert chart interpretation.

SPC supports multiple printer types; exports to common graphics packages such as Harvard Graphics, WordPerfect, Microsoft Word, and Microsoft Powerpoint; and exports to post Script files. It imports data from ASCII files.

Specifications: The software is on one 3 1/2 inch diskette, 720K double density. Documentation included; may be ordered separately as PB93-134856. System: IBM-PC or compatible ; MS DOS 3.21 or higher operating system. SPC is PC LAN capable. Sample datafiles are provided for instruction.

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EDUCATION & TRAINING

◆ Nihongo Tutorial System

National Science Foundation

Order number PB93-500320CBX
Price code: D02

The Nihongo Tutorial System is an intelligent tutorial system designed to use a computer to assist scientists and engineers in developing reading competence in technical Japanese. It is comprised of three applications: the Nihongo Tutor, the Parse Tree Editor, and the Administrator. The Nihongo Tutor provides useful information about an article such as an English translation, syntax and pronunciation to help the student to comprehend the text of a personalized lesson. It also records the student's performance into his personal database which reflects his current Japanese language proficiency. The Administrator uses the personal data of a student to assign an article that is related to his technical interests and at his current level of Japanese competence. The Parse Tree Editor is used to prepare technical articles for the tutorial system by incorporating semantic, syntactic, phonetic, and morphological information into the parse tree of a sentence in each article.

Due to space limitations, no specialty dictionaries are included on the disk and only two short lessons are included as examples. In addition, since the character dictionary, general dictionary and grammar dictionary all contain copyrighted material, all English translations have been replaced with X's.

Specifications: The software is on one 3 1/2 inch diskette, 720K double density. Documentation included; may be ordered separately as PB93-108306 and PB93-108314. System: Macintosh Plus or higher; Kanjitalk 6.0.7 operating system, 1MB.

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◆ Training Information Program, Version 1.0 (3 1/2-inch, high density)

Executive Office of the President, Office of Personnel Management

Order number PB93-500148CBX
Price code: D01

The Training Information Program is a PC-based interactive software system developed by the U.S. Office of Personnel Management to help Federal employees obtain relevant information about training and career development opportunities. Users of the program can quickly access information on more than 1000 training courses available nationwide to any Federal employee. The courses include classroom, correspondence, and computer-based courses as well as long-term developmental opportunities. A search for courses can be done by course title, skill category (e.g. oral communication), subject matter (e.g. accounting), course provider (e.g. OPM Atlanta Region), location, type of training (e.g. correspondence), length (e.g. three days or less), and cost (e.g. $300 or less). A detailed description of each course includes its objectives, intended audience, locations and dates of the course, and the name and telephone number of the course provider.

Specifications: **Diskette.** The software is on one 3 1/2 inch diskette, 1.44M high density. Documentation included; may be ordered separately as PB93-100212. System: IBM or compatible PC; PC DOS 3.0 or greater operating system.

◆ Training Information Program, Version 1.0 (5 1/4-inch, high density)

Executive Office of the President, Office of Personnel Management

Order number PB93-500130CBX
Price code: D01

Specifications: The software is on one 5 1/4 inch diskette, 1.2M high density. Documentation included; may be ordered separately as PB93-100212. System: IBM or compatible PC; PC DOS 3.0 or greater operating system.

◆ Troubleshooting, Assessment, and Enhancement (TAE) Program, Version 5.0

Department of Defense

Order number AD-M000 063CBX
Price code: D05

The purpose of the Troubleshooting Assessment and Enhancement (TAE) R&D effort was to develop, test, and review a low-cost microcomputer-based system to provide an objective measure of the troubleshooting proficiency of Navy technicians. Specifically, the TAE program;(1)assesses personnel troubleshooting capabilities within the Navy training environment, (2)develops drill and practice for personnel in training awaiting hardware availability or active duty assignments, (3)improves curricula and training methods based on school troubleshooting assessment results, (4) provides fleet and reserve on-board training (OBT) through drill and practice exercises, (5) develops an objective measure of operational readiness of fleet ad reserve personnel in their area of systems hardware troubleshooting capability, (6)Improves operational readiness and(7) improves curricula and instrucation methods as a result of operational fellt and reserve feedback of assessment/evaluation data to the training community.

Specifications: The software is on 21 5 1/4 inch diskettes, 360K double density. File format: ASCII . Documentation included; may be ordered separately as AD-A236411. System: IBM XT; MS DOS 3.21 operating system. Required Hardware: 20 Megabyte hard drive, 640 Kylobytes of RAM, an enhanced Graphics Adapter (EGA) card, and a 13 inch EGA color Moniter. Internal File Identifier: TAE and TPEP.

ELECTROTECHNOLOGY

STAT 2 Version 2.00A

Department of Commerce, National Institute of Standards and Technology

Order number PB86-182490CBX
Price: $90

STAT2 is a FORTRAN program which is used to analyze and display data from microelectronic test structures fabricated on semiconductor wafers. The program reads data as a two-dimensional array, extracts sample statistical values, identifies outliers, calculates replacement values for outliers, and makes histograms and circular gray-tone data maps. Version 2.00A is an adaptation of STAT2 to run under Version 3.2 of the RSX-11M operating system. The operating system is used on the automatic tester which acquires the test structure data. Data can therefore be taken and analyzed on the same system

Specifications: The software is on one 8 1/4 inch diskette, double density. System: DEC LSI-11/23, RSX-11/3.2 operating system, 30K. Language: FORTRAN.

ENERGY SOURCES, GENERATION, & TRANSPORTATION

Hospital Energy Analysis Toolkit (HEAT)

Department of Commerce, National Institute of Standards and Technology

Order number PB90-504036CBX
Price code: D01

The Hospital Energy Analysis Toolkit (HEAT) is a menu-driven microcomputer software program designed to help facility managers of existing hospitals evaluate the cost effectiveness of specific Energy Saving Methods (ESMs). The program estimates the energy savings and cost effectiveness of specific ESMs in a user-defined hospital environment. Hospitals are defined in terms of an unlimited number of actual functional space zones, each modeled after one of 21 prototype zones. For each defined zone, the user specifies the floor area, and for some zones the user specifies the types of heating and cooling systems, the percentage of space being actively used, and the window orientation. The user also defines an Energy Saving Plan by specifying the current and planned status of each energy parameter applicable to the particular zone. HEAT then computes and reports the energy and economic savings resulting from the Plan. A benchmarking function lets users compare energy use of the entire hospital with national norms to see whether further analysis is warranted. HEAT offers easy-to-use menus and function keys, on-line help screens, and data validation.

Specifications: The software is on one 5 1/4 inch diskette, 360K double density. File format: ASCII. System: Intel 8088/286/386; MS DOS operating system, 512K. Language: Clipper and C. A microcomputer with a hard disk drive is required.

Levelized Nuclear Fuel Cost Code (Model-Simulation)

Department of Energy, Energy Information Administration

Order number PB91-507285CBX
Price code: D01

Levelized Nuclear Fuel Cost Code computes an electric utility's levelized nuclear fuel cost (mills per kilowatt-hour). The code computes quantities of fuel cycle services and levelized direct costs which include the carrying charges accounting for the time value of money. All fuel-cycle services from natural uranium purchased through waste disposal are covered.

Specifications: The software is on one 360K 5 1/4 inch diskette, double density. File format: Lotus 1-2-3. System: IBM PC compatible; DOS 3.2 operating system, 360K. Language: Lotus 1-2-3.

◆ Low Income Household Energy Assistance Program (LIHEAP) Model of State-Level Residential Energy Prices, 1992-1993

Department of Energy, Energy Information Administration

Order number PB93-503035CBX
Price code: D02

Program is a set of State-level regression equations used to project State residential energy prices for the current year and one future year, based on national-level residential price projections produced for the Energy Information Administration's (EIA) Short -Term Energy Outlook. Program produces 51 separate sets of projections of residential prices (50 for each State and 1 for the District of Columbia), including prices for electricity, natural gas, heating oil, liquefied petroleum gas (LPG-propane), kerosene and coal. Less than 51 projections are available where historical information for a State is nonexistent or unavailable. The State price projections from LIHEAP are published annually in the EIA service report, State Energy Price Projections for the Residential Sector.

Specifications: The software is on one 5 1/4 inch diskette, 1.2M high density. Documentation included; may be ordered separately as PB93-155042. System: Compaq 386s/Deskpro; DOS 3.0 operating system, 250K. Language: Lotus 1-2-3, v.2.2 W.

✱ ◆ Market Penetration Models, 1992

Department of Energy, Energy Information Administration

Order number PB93-502417CBX
Price code: D02

Market Penetration Models is used by the Energy Information Administration (EIA) to project the potential of ground water heat pump systems, active and passive solar technologies, and residential rooftop photovoltaic systems to displace primary energy from the present up to the year 2030. For all three systems, the model provides projections in five-year increments for four aggregated groups of the ten Department of Energy (DOE) regions.

Specifications: The software is on two 5 1/4 inch diskettes, 1.2M high density. File format: Multiple formats. Documentation included; may be ordered separately as PB93-111359. System: Compaq 386s/Deskpro or IBM compatible PC; DOS 4.0 operating system. Data files are Lotus 1-2-3 v3.1; Manual on diskette is WordPerfect 5.1; Minimum of 2.4Mb free hard disk space required.

◆ Oil Market Simulation Model, 1992 (Model-Simulation)

Department of Energy

Order number PB93-500338CBX
Price code: D01

OMS projects future world oil prices and world crude oil supplies and demands by region (the United States, Canada, Japan, and OECD-Europe, OPEC, developing countries, and net Communist trade) on an annual basis through the year 2010. The OMS model is used as an adjunct to the Transportation and Refining of International Petroleum Model, formerly the Petroleum Allocation Model.

Specifications: The software is on two 5 1/4 inch diskettes, 1.2M high density. File format: Lotus 1-2-3 Release 2. Issued annually. System: IBM PC or compatible; DOS 4.0 operating system, 500K. Language: Lotus 1-2-3 v.2.0. The user instructions are in the ASCII file, INSTALL.TXT on the OMS92 diskette.

VENT II (Version 4.1) An Interactive Program for Design and Analysis of Venting Systems for One or Two Gas Appliances (Model-Simulation)

Department of Commerce, National Telecommunications and Information Administration

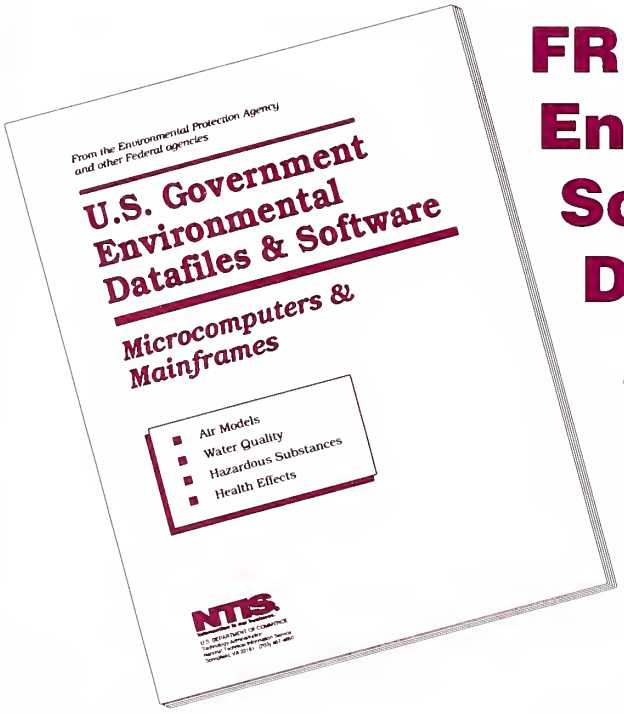
Order number PB91-509950CBX
Price code: D02

The VENT II (Version 4.1) program analyzes the transient response of the vent system for one or two gas appliances as they cycle, predicting temperatures, flows, pressures, and wet-times throughout the vent system. Both fan-assisted and draft hood- equipped appliances may be modeled in any combination. The graphical, menu-driven user interface provides a clear, convenient method of entering input data and viewing output data. The program has been experimentally validated in the laboratory.

New features in Version 4.1 include the ability to model vent systems with vent dampers, vent joint infiltration, and recirculating flows in oversize vents. In addition, the user also has the ability to change the appliance fuel from natural gas to propane, butane, or any combination of standard constituents.

Specifications: The software is on two 5 1/4 inch diskettes, 360K double density. File format: ASCII Text (Diskette or Tape). The diskette(s) are in ASCII format. Documentation included; may be ordered separately as PB91-228163. Issued N/A. System: IBM-PC or compatible; MS-DOS 2.1+ operating system, 256K. Language: Compiled BASIC and C. Requires color EGA adapter and monitor. Hard disk and math-coprocessor highly recommended.

ENVIRONMENT



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◆ World Energy Projection System (WEPS93) 1993

Department of Energy, Energy Information Administration

Order number PB93-505782CBX
Price code: D03

WEPS-PC is an integrated set of microcomputer-based Lotus spreadsheets containing data compilations, assumption specifications, descriptive analysis procedures, and projection models. WEPS-PC provides projections of total world primary energy consumption disaggregated by ten individual countries and ten country groupings; projections of energy consumption by primary energy type and by economic sector for selected countries; and projections concerning world oil supplies for use in the Oil Market Simulation (OMS) Model. For both historical series and projection series, WEPS-PC provides analytical computations of percentages of energy consumption attributable to each primary energy source, total energy consumption per dollar of gross domestic product (GDP), and an energy/GDP index. WEPS-PC projections and analyses are published annually in the International Energy Outlook (IEO) and are used in various internal EIA studies.

Specifications: The software is on three 5 1/4 inch diskettes, 1.2M high density. Documentation included; may be ordered separately as PB92-169572. Documentation is also on a diskette. System: Compaq 386s/Deskpro or IBM PC Compatible; DOS 4.0 operating system, 520K. Language: Lotus, version 2.01 and WordPerfect, version 5.1.

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ENERGY-NUCLEAR

✱ ◆ International Nuclear Model (INM92) (Model-Simulation)

Department of Energy, Energy Information Administration

Order number PB93-503001CBX
Price code: D02

The International Nuclear Model - Personal Computer (PCINM) is a deterministic model used by the Energy Information Administration to project domestic and international nuclear energy requirements. The EIA uses PCINM to project aggregate spent fuel discharges, fuel cycle requirements, online and year-end capacities, and electricity generation for domestic and foreign nuclear reactors on an annual basis using a simple accounting technique. PCINM can be used to produce projections for an y country in the world for any specified time period. Currently eight (8) different country groups are being projected through the year 2010. To produce the forecasts, EIA develops a set of operational assumptions for capacity factors, full power days, reactor size, and reload quantities. These assumptions are derived statistically from historical operating data and from utilities' projected fuel management schemes and are incorporated into fuel management plans. Estimates of nuclear fuel cycle trends are determined by surveying utilities, fuel vendors, and other industry experts.

Specifications: The software is on one 5 1/4 inch diskette, 1.2M high density. The diskette(s) are in EBCDIC format. System: Compaq 386s/Deskpro; DOS 3.2 operating system, 8MB. Language: Clipper 5.01, PC-SAS. The user instructions are in the file INSTALL.DOC which is stored WordPerfect 5.1 format.

◆ Oak Ridge Uranium Market Model, 1992

Department of Energy, Energy Information Administration

Order number PB93-503043CBX
Price code: D02

The Oak Ridge Uranium Market Model projects prices, production, imports, inventory, capital expenditures and employment in the uranium mining and milling industry. The model considers every major production center and utility on a worldwide basis (with centrally planned economies considered in a limited way).

Specifications: The software is on one 5 1/4 inch diskette, 1.2M high density. File format: Turbo Pascal, v.5.5. System: IBM-compatible; DOS 4.0 operating system, 640K.

◆ World Integrated Nuclear Evaluation System 1991 (WINES91)

Department of Energy, Energy Information Administration

Order number PB92-501311CBX
Price code: D01

The World Integrated Nuclear Evaluation System 1991 (WINES-PC) is used to project domestic and international nuclear energy requirements into the long-term (through 2030). WINES-PC, an aggregate demand-based partial equilibrium model, generates nuclear energy requirements in broad context of national economic activity, labor force population and productivity, energy demand measured at end uses, price and income effects, and electricity production. The WINES-PC model serves as a flexible tool with which to assist the Department of Energy program offices and other government agencies in their analyses of long-term nuclear energy demand and supply, and to support cooperative efforts between the United States, the Nuclear Energy Agency, and the Organization for Economic Cooperation and Development (OECD)

Specifications: The software is on one 5 1/4 inch diskette, 1.2M high density. File format: WordPerfect v. 5.1. System: Compaq 386s/Deskpro; MS DOS 4.0 operating system, 640K. Language: FORTRAN v. 3.31. The user instructions are in the file WINESARC.91 which is stored in WordPerfect v.5.1 format. The Manual may be printed by issuing the print command forma the WordPerfect environment. Adjustments to the printing parameters may be required.

HEALTH-NUTRITION

USDA Dietary Analysis Program, 1.2M

Department of Agriculture, Foreign Agricultural Service

Order number PB90-504101CBX
Price: $60

USDA's Dietary Analysis program is a user-friendly software package developed by Human Nutrition Information Service in cooperation with the extension system for use with consumers. The program performs dietary analyses for 28 nutrients for food components using up to 3 days of reported food intakes. A menu-entry approach can be used to enter foods for analysis. Standard output produced by the dietary analysis program consists of a complete list of foods and quantities reported; bar graphs showing the percentage of user's RDA for 15 nutrients; percent of calories from protein, carbohydrate, fat, saturated fatty acids, and alcohol; and dietary totals for selected nutrients and components of interest to the user.

Specifications: The software is on on 5 1/4 inch diskette, 1.2 high density. File format: ASCII. System: AT&T PC 6300; MS DOS/3.2 operating system, 256K. Language: Basic.

USDA Dietary Analysis Program, 1.44M

Order number PB90-504093CBX
Price: $60

Specifications: The software is on on 5 1/4 inch diskette, 1.2 high density.

USDA Dietary Analysis Program, 720K

Order number PB90-504085CBX
Price: $60

Specifications: The software is on on 5 1/4 inch diskette, 1.2 high density.

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HEALTH CARE

Blood-Tissue Exchange Models, BTEX 30 & 40

Department of Health and Human Services, National Institutes of Health

Order number PB90-501396CBX
Price code: D01

The model subroutines are used for analyzing multiple indicator dilution data as well as residue function data obtained by poistron tomography.

BTEX30 is an algorithm for a differential operator modeling a 'tissue cylinder' consisting of three concentric regions of equal length (capillary plasma, p; interstitial fluid, ISF; and parenchymal cell, pc) separated by two barriers (the capillary wall between the capillary and the interstitium, and the membrane between the interstitial fluid and parenchymal cell).

BTEX40 is an algorithm for a differential operator modeling a 'tissue cylinder' consisting of four concentric regions of equal length (capillary plasma, p; endothelial cell, ect; interstitial fluid, ISF; and parenchymal cell, pc) separated by three barriers (the luminal or plasma surface and endothelial cell layer, the abluminal surface of the endothelial cell facing the intersititium, and the membrane between the intersititial fluid and parenchymal cell). In addition, there is a diffusional path from plasma to ISF bypassing endothelial cell via intercellular clefts.

Specifications: The software is on one 1.2M 5 1/4 inch diskette, high density. File format: ASCII . System: Any computer with FORTRAN77 compiler; Memory: 150K. Language: FORTRAN 77.

✱ ◆ Calculation of Galactic Radiation Dose Equivalent Received on an Airplane Flight (CARI)

Federal Aviation Administration

Order number PB92-502038CBX
Price code: D02

Computer program CARI calculates the galactic radiation dose equivalent received by an individual on an aircraft flying a great circle route between any two locations in the world. The program takes into account changes in altitude and geographic location from takeoff to touchdouwn. Also taken into account is the stage of the 11-year solar cycle at the time of the flight. The present version of CARI can process flight data that includes en route altitudes up to 67,000 feet.

To run the program: copy all files (both disks) into the same directory on the hard disk of an IBM-PC compatible , Type CARI, and press enter.

Specifications: The software is on two 3 1/2 inch diskettes, 1.44M high density. System: IBM compatible; MS DOS 3.1 or higher operating system, 640K. Language: Quick Basic compiled. To run program, copy all files into the same directory on the hard disk and type CARI. (Make backup copies of all files).

Grateful Med Macintosh Version

Department of Health and Human Services, National Library of Medicine

Order number PB89-196083CBX
Price: $29.95

GRATEFUL MED is a software package for the Apple Macintosh computer that provides easy searching of the National Library of Medicine's MEDLARS online system. There are over 12 databases available, including MEDLINE and its backfiles. GRATEFUL MED is designed to allow users to search NLM's databases with no training or prior experience, and to minimize the cost of searching by performing most tasks offline, on the user's Macintosh. GRATEFUL MED helps the user formulate the search, calls the NLM computer, enters the user's code and password, enters the search queries, downloads the retrieved references, including abstracts, to the user's Macintosh, and logs off. The user can then review the results offline. The retrieved references can be printed or saved to a file. Because the user is not involved in the brief online session, time spent actually connected to the NLM computer is minimal.

Specifications: The software is on one 800 3 1/2 inch diskette, double density.

Grateful Med (Version 5.0 for DOS)

Order number PB86-158482CBX $29.95

Specifications: The software is on two 5 1/4 inch and 3 1/2 diskettes, double density. System: IBM-PC or compatible; DOS 2.0 operating system.

GROUPER with Medicare Code Editor (HG/MCE) Version 8.0

Department of Health and Human Services, Health Care Finance Administration

Order number PB91-506766CBX
Price code: D08

3M HIS's HCFA Grouper with Medicare Code Editor (HG/MCE) provides accurate DRG grouping and editing. It calculates DRG assignment and provides clinical data on each patient entered into the program. HG/MCE provides clinical edits that identify inconsistencies and uses clinical edits to evaluate a patient's principal diagnosis, any secondary diagnoses, surgical procedures, age, sex, or discharge status. All versions of the DRG grouper can be accessed by HG/MCE. The DRG assignment feature of HG/MCE includes, as a minimum, the same grouper program used by the Health Care Financing Administration (HCFA). HG/MCE contains all the HCFA Groupers used since the inception of the Prospective Payment System (PPS). The groupers contained within HG/MCE automatically call the appropriate HCFA grouper based on: 1) the groupers installed at your site, and 2) the discharge data that the user enters into the product.

Specifications: The software is on 12 5 1/4 inch diskettes, 360K double density. File format: ASCII. Documentation included; may be ordered separately as PB91-151449. System: IBM-PC/XT; DOS 3.10 or greater operating system, 640K. Includes HG/MCE 8.0 Install - 1 diskette, HG/MCE 8.0 Product - 4 diskettes, 1 diskette for each of the following: Grouper 2.0, Grouper 3.0, Grouper 4.0, Grouper 5.0, Grouper 6.0, Grouper 7.0 and Grouper 8.0.

✱ ◆ HCFA Grouper with Medicare Code Editor (HG/MCE) Version 10.0

Department of Health and Human Services, Health Care Finance Administration

Order number PB93-500445CBX
Price code: D05

Health Care Financing Administration (HCFA) Grouper with Medicare Code Editor (HG/MCE) provides accurate DRG grouping and editing. HG/MCE calculates DRG and MDC assignment. HG/MCE displays clinical edits that identify inconsistencies. It evaluates a patient's principal diagnosis, any secondary diagnoses, surgical procedures,age, sex, and discharge status. It displays the cost weight associated with the assigned DRG for each patient record. The DRG assignment feature of HG/MCE includes the same grouper program used by HFCA and all versions of the HCFA grouper created since the inception of the Prospective Payment System (PPS). Program automatically calls the appropriate HCFA grouper based on the groupers installed at your site and the discharge date on a patient record.

Specifications: The software is on eight 5 1/4 inch diskettes, 360K double density. Documentation included; may be ordered separately as PB93-111664. System: IBM PC or compatible; MS DOS operating system. At the time of installation, there is a patch diskette which needs to be added to the Grouper program. Instructions are included for the necessary procedures.

◆ Outpatient Code Editor(OCE) Version 8.0

Department of Health and Human Services, Health Care Finance Administration

Order number PB93-500452CBX
Price code: D06

The Outpatient Code Editor was developed to ensure accurate coding by detecting potential problems in the coding of claims data. An edit message is associated with each type of possible claims coding problem. Diagnoses are coded by ICD-9-CM classification; procedures are coded by Common Procedure Coding System (CPCS) created by HCFA. CPCS incorporates Common Procedural Terminology - Fourth Edition (CPT-4) codes and HCFA-designated codes for non-physician services and other procedures not in CPT-4. The program screens each procedure code against: a list of approximately 2200 ASC procedures, a list of 'Out of Scope' procedures and the entire CPT code list, including all recent releases.

Specifications: The software is on 13 5 1/4 inch diskettes, 360K double density. File format: ASCII. Documentation included; may be ordered separately as PB93-111672. System: IBM-PC/XT; MS DOS operating system, 512K. This includes 1 Installation diskette, 2 Code Description Database diskettes and 10 Executables.

PDQ User's Guide (with PDQ Access)(Version2.01)(for microcomputers)

Department of Health and Human Services

Order number PB90-502725CBX
Price: $34.95

PDQ is a clinically oriented computer database developed to make information on cancer treatment widely available to the medical community and to the lay public. It provides state-of-the-art cancer treatment information, cancer research protocols, and directories of physicians and organizations providing cancer care. PDQ automatically performs the dialing and logging into the system, provides help to navigate through the system, captures all or part of the online session to disk, provides back scroll capability and disconnects with a single keystroke. There is a built-in utility to capture a CANCERLIT search from PDQ and automatically run the search on the CANCERLIT database. Offline, the program allows the captured data to be reviewed on the computer screen or printed on a printer. The program works only on the National Library of Medicine's MEDLARS system available by local dialing, COMPUSERVE, SPRINTNET, TYMNET, and INFONET telecommunications networks.

Specifications: The software is on one 5 1/4 inch and 3 1/2 diskette, 360K and 720K double density. File format: ASCII. System: IBM PC XT/AT/PS2; PC DOS/MS DOS 2.0+ operating system, 256K. Hayes Smartmodem or compatible hardware.

Physician Claim Entry System

Department of Health and Human Services, Health Care Finance Administration

Order number PB85-146793CBX
Price: $160

The 'Physician Claim Entry System' (PCES) is software designed to enable physicians to electronically capture claims data for Medicare Part B claims, Private Medicare Supplemental Insurance claims (i.e., Blue Shield or Commercial carrier), Medicaid claims and subsequently transmit the claims to a Medicare carrier for payment. The software provides for claims entry, claims print and claims transmission of the aforementioned claims types. Additionally, four supplemental files (Provider file, patient file, diagnosis file, procedure file) are available to facilitate claims entry.

Specifications: The software is on six 5 1/4 inch diskettes, 360K double density. System: IBM-PC or compatible; PC-DOS 1.1 or 2.0 operating system, 128K.

Severity Classification System for AIDS Hospitalization

Order number PB88-249396CBX
Price code: D01

Disease staging uses ICD-9-CM diagnosis codes in automated discharge records to define discrete points towards increased morbidity and likelihood of death of the patient in the progression of nearly 400 individual diseases. These points are represented by numeric codes from 1.0 to 4.0 with the higher codes representing death.

Specifications: The software is on one 5 1/4 inch diskette, double density. System: IBM-PC or compatible; PC/DOS operating system, 360K.

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✱ ◆ Uniform Clinical Data Set System (UCDSS) Software (Version 4.0)

Department of Health and Human Services, Health Care Finance Administration

Order number PB93-502714CBX
Price code: D02

The Uniform Clinical Data Set (UCDS) Software is designed to collect data critical for the measurement and uniform evaluation of the quality and medical necessity of care Medicare beneficiaries receive. The components are:

- UCDSS Data Collection System (DCS)
- UCDSS Data Dictionary (dd)
- Patient Care Algorithm System (PCAS)
- Inference Engine
- Case Summary

The DCS is interactive and designed to be used by a trained medical abstracter to collect data from a patient's inpatient hospital medical record using desktop or portable computer hardware. The DD contains the definitions for the 1800+ UCDSS data elements including the data elements for the Cooperative Cardiovascular Project. The PCAS is a set of clinical algorithms which apply decision rules to identify possible deviations from standard care using the data abstracted from the medical record. The inference engine runs the PCAS logic against case data entered. The case data are screened for medical review and to profile care. The case summary details which algorithms the case failed; why the case has been referred for phyician review; and all of the abstracted data in a uniform format.

Specifications: The software is on one 3 1/2 inch diskette, 1.44M high density. System: 386 33 Mhz IBM PC or 100% IBM PC compatible with 2 MB RAM ; DOS 5.0 operating system, 2000K. Language: Clipper Version 5.0. 6MB hard disk space for installation, plus 7MB per 1000 cases loaded onto the system. DOS 5.0 and expanded memory manager. 580K of free base memory is required.

LIBRARY & INFORMATION SCIENCES

CHEMLEARN; Microcomputer-Based Training for CHEMLINE

Department of Health and Human Services, National Library of Medicine

Order number PB88-218144CBX
Price: $24.95

A training package designed to teach medical and health professionals, as well as librarians and information scientists, how to effectively use CHEMLINE. It consists of an online chemical dictionary file which provides a mechanism whereby information on over 750,000 chemical substances can be searched and retrieved online.

Specifications: **Diskette.** The software is on three 5 1/4 inch + 3 1/2 i diskettes, double density. System: IBM-PC/XT/AT PS2 or compatible operating system.

◆ NLM Micorocomputer-based Tutorials 1992

Department of Health and Human Services, National Library of Medicine

Order number PB92-780438CBX
Price code: D01

TOXLEARN has been designed to teach librarians and information specialists, as well as scientists, how to search TOXLINE effectively. It provides the skilled searcher with a way to easily reinforce or recall previously-learned search techniques. It may be used in place of formal training, as a precursor to or a refresher following formal training, or for review of a particular concept. TOXLEARN is organized into seven chapters. The introduction is presented in Chapter one. Chapters two, four, and six present information on the content and use of TOXLINE followed by multiple choice and/or completion problems. Chapter two covers the basic data elements used when searching TOXLINE; A detailed discussion on the structure and use of MeSH is presented in Chapter four and selected search limiters are covered in Chapter six. Chapters three, five, and seven provide searches which simulate actual online sessions. TOXLEARN contains approximately four hours of interactive instruction.

Specifications: The software is on 16 5 1/4 inch and 3 1/2 diskettes, double density. File format: ASCII. System: IBM-PC/AT/XT/PS2 and compatibles; DOS 2.0+ operating system, 512K. Language: PILOTplus . At least one disk drive; supports most monochrome, color graphics, enhanced color graphics or visual graphics displays.

Toxicology Information Program (TIP) Files Demo Disk

Department of Health and Human Services, National Library of Medicine

Order number PB90-502246CBX
Price: $15

The Toxicology Information Program (TIP) Files Demo Disk is an interactive, microcomputer demonstration of the CHEMLINE, TOXLINE, TOXLIT, RTECS, HSDB, CCRIS, and DIRLINE files. It is designed to acquaint new users with the content and search capabilities of these databases. There is a section on each database containing a brief description of the file and several sample searches.

Specifications: The software is on one 360K 5 1/4 inch diskette, double density. The diskette(s) are in ASCII format. System: IBM-PC AT XT PS/2; DOS 2.0 + operating system, 256K. *ALS0 included in package is 1 PS/2 diskette.

MANUFACTURING & INDUSTRIAL

◆ Cut Order Planning (COP) in Apparel Manufacturing, Version 1.0

Department of Defense, Defense Logistics Service Center

Order number AD-M000 124CBX
Price code: D05

Results of a research project which investigated methods for improving cut order planning (COP) in apparel manufacturing. A mathematical model of the COP problem was developed to facilitate problem specification and to initiate heuristic development. New methods were developed which perform as well as or better than those used in existing commercial packages. These algorithms have been implemented in a prototype software package for easy incorporation into existing commercial software.

Specifications: The software is on two 5 1/4 inch diskettes, 360K double density. File format: ASCII. Documentation included; may be ordered separately as AD-A249 096 and AD-A249 097. System: IBM compatible; MS DOS operating system. Please Note: before running a program, it is necessary to copy the input data to a file named 'INPUT'. The input files are listed under the .\DATA and correspond to the file names for the executable programs in \EXE. Please refer to the Final Report for more details. Computer source code is written in Ansi C.

MATERIALS SCIENCES

An Overview of the Structural Ceramics Database (Release No. 1) (Model-Simulation)

Department of Commerce, National Institute of Standards and Technology

Order number PB90-504218CBX
Price: $60

The NIST Structural Ceramics Database (SCD) is a computerized, user-friendly database of materials properties for advanced ceramics intended for high temperature structural applications. Version 1.0 contain thermal and mechanical property data for silicon carbides and silicon nitrites. A computerized overview of the user-friendly features has developed to illustrate the capability of the SCD and their use in a typical interactive application. The overview allows the user either to participate actively in the overview by pressing the appropriate keys or to view the overview passively as the program proceeds automatically. In either case, the overview is designed to proceed in the correct sequence regardless of what keys the user presses.

Specifications: The software is on one 5 1/4 inch diskette, 360K double density. File format: ASCII. System: IBM PC and compatibles; MS DOS 2.1 or higher operating system, 640K. Language: Runtime Demo.

MATHEMATICS & STATISTICS

MLRP - Multiple Linear Regression Program

Department of Defense

Order number AD-A204 565CBX
Price code: D01

Program follows the procedures of 'Statistical Methods in Hydrology' (Beard, 1962). Major features of the program are automatic deletion of independent variables to form new variables, transformation of variables, tabulation of the residuals from the prediction equation and acceptance of input coefficients.

Specifications: The software is on one 5 1/4 inch diskette, double density. System: IBM-PC or compatible; MS/PC DOS 2.1 + operating system, 512K. Math coprocessor is required.

◆ PC-OMNITAB: An Interactive System for Statistical and Numerical Data Analysis, Version 7.0 (Model-Simulation)

Department of Commerce, National Institute of Standards and Technology

Order number PB93-500437CBX
Price code: D03

PC-OMNITAB, an interactive system for statistical and numerical data analysis, is an extension of OMNITAB 80 as described in NBS Special Publication 701. It permits one to perform arithmetic, complex arithmetric, trigometric calculations as well as data manipulation, special function calculations, statistical analysis, matrix and array operations. Some of the major statistical capabilities are regression, correlation analysis and oneway/twoway analysis.

The system can be implemented on a 386/486 personal computer which has a math coprocessor and at least 4 MBytes of RAM. PC-OMNITAB responds to simple instructions to obtain accurate results since reliable, varied and sophisticated algorithms for data analysis and manipulation are referenced.

Specifications: The software is on one 3 1/2 inch diskette, 1.44M high density. Documentation included; may be ordered separately as PB93-111656. System: 386/486 PC with Math Coprocessor; DOS 3.30 or higher

operating system, 4MB. Language: Executable/Fortran. Check with README file before installing. Then use INSTALL file to load PC-OMNITAB on the PC. Requires the OTG DBOS and OTG FTN runtime library. Contact OTG Systems, Inc. (717-222-9100) for above software.

* ◆ Sampling Design Software Version 2.0

Department of the Army, US Army Corps of Engineers

Order number AD-M000 211CBX
Price code: D02

Four programs were developed to assist the user with problems with sampling design and its evaluation. The programs aid the decision-making process in sampling design through the use of decision matrices: variance component analysis, error analysis, and cluster analysis. Although the examples used relate to reservoir water quality, the program is generic and can be used to develop any sampling design and evaluation methodology.

The decision matrix portion of the software aids in the determination of sample size for multi-variable sampling programs and can be used for either simple random or stratified random sampling designs. The decision matrix is simply a tabular presentation that incorporates the factors necessary to determine sample size: (a) an estimate of the mean, (b) an estimate of the variability (c) desired precision, (d) the acceptable probability of error, and (e) the costs associated with sampling. Sample sizes and costs for each variable are presented with respect to error probability and precision. The results of the analysis can be used to develop a sampling design within both statistical and financial constraints.

A second component allows for variance component analysis. This is a technique for quantifying the sources of variability in the data resulting from a given sampling design. The analysis results in the determination of each design component's contribution to the overall variance. Based on these results, sampling effort allcated to a given component of the design could be reduced or eliminated.

The Error Analysis component can be used to improve an existing sampling design that used the observed distribution of variance to redefine the sampling design. The results of the error analysis are used to redistribute samples to the existing strata to produce the minimum variance about the mean. The technique can be applied to the data of a stratified sampling design or to the data from a simple random or a systematic sample that has been subjected to poststratification (i.e., defining strata a posteriori).

The final componet supports cluster analysis. Cluster analysis is a multivariate classification technique that may be used to group or identify similar objects or entities. For the purposes of sampling design evaluation, cluster analysis can be used to identify and possibly reduce redundancies in the sampling design.

The CLUSTER program can be used to identify redundancies in sampling programs and suggest ways in which to reduce sampling effort in future studies. CLUSTER uses one of three clustering methods (average linkage, centroid, or Ward's method) to cluster the data; outputs a tabular 'history' of the clustering; and produces a dendrogram of the clustering.

All of the programs provide easy-to-use input screens and display output both on the screen or as exportable files.

Specifications: The software is on one 5 1/4 inch diskette, 360K double density. Documentation included; may be ordered separately as AD-A262 632. System: IBM compatible; MS DOS operating system. Supports basic PC's, AT types, and higher PCs. Numeric co-processors are not required, but will be used if present. The CGA, RGA, VGA, and Hercules graphics drivers are supported.

◆ Separation of Simultaneous Word Sequences Using Markov Model Techniques (SSWSUMMT)

Department of Defense

Order number AD-M000 099CBX
Price code: D02

This thesis develops a method separating multiple simultaneous conversations through the use of Markov Models. Text samples which represent the conversations to be used as training data are described by a grammar based upon word and word pair occurrences within the text. This grammar is then used to establish a Markov Model for the text. These models are then combined to form a Markov Model which describes the simultaneous occurrence of multiple conversations. Artificially generated word sequences which have the same grammar as the training conversations are supplied as input to the conversation filter, whose purpose is to 'listen to' one of the input sequences. The conversation filter takes on either an optimal form in which the grammars of all input sequences to the filter are known, or a sub-optimal form which uses only the grammar of the desired output sequence. The conversation filter utilizes the Viterbi algorithm to extract the optimal text sequence for a best match to the grammar of the desired output. Analysis is performed to determine the efficiency of the algorithm and the performance of the algorithm for varying degrees of similarity between the grammars being separated.

Specifications: The software is on one 5 1/4 inch diskette, 360K double density. File format: ASCII text. Documentation included; may be ordered separately as AD-A243 374. System: IBM Compatible. Executable files are not in ASCII. A color monitor is required.

Subspace Iteration Algorithms in FORTRAN 77 & FORTRAN 8X

Department of Defense

Order number AD-A212 274CBX
Price code: D01

Program contains a USA FORTRAN ANSI x3.9-1978 implementation of the Rutishauser-Reinsch subspace iteration algorithm for partial solution of the algebraic eigenvalue problem for a real matrix symmetric relative to a prescribed inner product.

Specifications: The software is on one diskette, double density. System: IBM-PC or compatible. Language: FORTRAN 77 & FORTRAN.

User Friendly IBM Personal Computer Program

Environmental Protection Agency

Order number PB87-126041CBX
Price code: D02

User friendly IBM personal computer programs were developed for individuals engaged in assessing statistical techniques and the quality sampling of a program. The programs may be used to obtain the benefits of the statistical package without an in-depth understanding of the statistics employed. Detailed descriptions of the statistical package are presented in the Appendices section of the accompanying report. To aid those designing field sampling programs, a series of questions and answers are also listed in the report, together with the names of the computer programs designed to answer the questions.

Specifications: The software is on one 5 1/4 inch diskette, double density. System: IBM-PC/XT/AT or compatible; DOS operating system, 360K. Language: BASIC.

MEDICAL SCIENCES

◆ DNAdraw (Version 3.52)

Department of Health and Human Services, National Institutes of Health

Order number PB92-500008CBX
Price code: D01

DNAdraw is a program used to prepare publication-quality output of DNA sequences. The program is menu-driven with extensive help information. DNAdraw formats raw sequence data with counts and translation as specified, then allows editing and highlighting with output to a LaserJet or Post Script printer. Highlight options include bold, greek, italic, and reversed font text, boxes with 8 different shade patterns, underlines, sub and superscripts, and proportionally-spaced characters.

Specifications: The software is on one 5 1/4 inch diskette, 360K double density. File format: ASCII and Binary. System: IBM PC; MS DOS 3.3 operating system, 256K. Language: C.

Hazard Communication Project; Computer Based Training Course

Executive Office of the President, Office of Personnel Management

Order number PB89-168132CBX
Price code: D02

There are 14 lessons ranging in length from 30 minutes to 1 hour. Course objectives:

- To inform employees of their employer's requirements under the OSHA Hazard Communication Standard (29CFR 1910.1200).
- To instruct employees on the procedures for obtaining and using information on hazardous materials, including:

1. Understanding labeling systems
2. Understanding the material safety data sheet information.

- To provide information on 11 classes of chemicals, including: their common uses, potential physical and health hazards, detection methods, and safety measure to follow.

Specifications: The software is on six 5 1/4 inch diskettes, double density. System: IBM-PC or compatible; MS-DOS operating system, 378K. Language: UNISON. EGA graphics card and monitor. Program will not run on monochrome or CGA systems.

Salmonella Data Management Software

Environmental Protection Agency

Order number PB89-151229CBX
Price: $55

Salmonella Data Management Software has been designed for analyzing mutagenicity data from the Salmonella Assay (Ames test). Variability in data interpretation may be attributed to many sources, including the test organisms, methodology and method of detecting the endpoint. The program will automatically supply an accepted method of statistical analysis and will, optionally, supply statistics from several different models, thereby eliminating a potentially major source of variability between investigators. Program allows the investigator to outline the data elements, within the acceptance criteria specified by the program, and enter the data in the given format. Statistics supplied include: 1) the initial slope of the dose-response curve (potency estimate), 2) a determination as to whether the computed slope is statistically different than zero (model dependent mutagencity determination), and 3) an indication of whether each dose is significantly different than the background (t-test). Slope estimation is performed using either a linear or one of two non-linear models. A standardized data output format is provided to facilitate review of results.

Specifications: The software is on two 5 1/4 inch diskettes, double density. System: IBM-PC/XT/AT or compatible; MS/PC DOS operating system, 512K.

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MILITARY SCIENCES

◆ Civilian Availability Model (CAM)

Department of Defense, Air Force

Order number AD-M000 116CBX
Price code: D02

The Civilian Availability Model (CAM) is a planning tool designed to estimate the availability of qualified workers in the work force to fill the manpower requirement generated by new weapon systems. The procedure is a step by step process to eliminate the uninterested, the medically and morally unfit, and the mentally incapable of military service.

Specifications: **Diskette.** The software is on one 3 1/2 inch diskette, 1.44M high density. File format: ASCII . System: IBM-PC Compatible; MS DOS 3.3 or higher operating system.

NATURAL RESOURCES, GEOLOGY, & HYDROLOGY

◆ Cavitation in Chutes and Spillways Version 1.0

Department of Interior

Order number PB93-500734CBX
Price code: D03

This product was created to give the designer of hydraulic structures both an understanding of cavitation and the design tools necessary to eliminate or reduce the damaging effects of cavitation in chutes and spillways. It discusses basic concepts, cavitation damage, practical methods of coping with cavitation damage, design recommendations, the influence of geometry and aeration, and Bureau of Reclamation field structures.

Specifications: The software is on three 5 1/4 inch diskettes, 360K double density. Documentation included; may be ordered separately as PB93-134849. System: IBM PC or compatible. Language: Microsoft-Fortran™. The plotting program is written in PLOT88™ which is compatible with Microsoft-Fortran™. The source and data diskette contains the source codes and example data for the executable programs.

◆ CONPLT-A Program to Generate Contours from HARPO/HARPA Environmental Models

Department of Commerce, National Oceanic and Atmospheric Administration

Order number PB92-504315CBX
Price code: D02

A FORTRAN computer program, CONPLT, was developed that will generate plotting-command files for contour plots of the environmental models (e.g., sound speed, current or wind velocity, temperature) used with the acoustic ray tracing programs HARPO (underwater acoustics) and HARPA (atmospheric acoustics). Contours of environmental model parameters can be obtained in any vertical or horizontal slice through three-dimensional models. A companion report, PSGRAPH — A Plotting Program for PC-HARPO, PROFILE, CONPLT and EIGEN describes an associated computer program that produces PostScript files as well as screen graphics for PC-compatible computers. We include a floppy disk with computer programs and a sample case. Also included are instructions for obtaining the programs (with updates) via Internet.

Specifications: The software is on one 5 1/4 inch diskette, 1.2M high density. Documentation included; may be ordered separately as PB92-218544. System: Machine Independent; DOS, UNIX, NOS, VMS operating system. Language: FORTRAN. Can be used with DOS, UNIX, NOS, VMS operating systems.

◆ Geo-EAS: Software for Geostatistics 1.2.1 (3 1/2 inch version)

Environmental Protection Agency, Office of Research and Development

3 1/2 inch format, 1.44M high density

Order number PB93-504967CBX
Price code: D02

5 1/4 inch format, 5 1/4 inch diskettes, 1.2M high density

Order number PB93-504959CBX
Price code: D02

The complexity of contaminant distribution and migration at hazardous waste sites requires a mathematical method that is capable of interpreting raw data and converting them to useful information. Though the application of geostatistics is crucial to the delineation of buried contaminants, not every field scientist can be expected to develop customized geostatistical algorithms for individual sites. This program offers the environmental scientist an interactive tool for performing two-dimensional geostatistical analyses of spatially distributed data.

Geo-EAS is designed to make it easy for the novice to use geostatistical methods and to learn by doing. It also provides sufficient power and flexibility for the experienced user to solve practical problems.

Geostatistical methods are useful for site assessment and monitoring where data are collected on a spatial network of sampling locations. Examples of environmental applications include lead and cadmium concentrations in soils surrounding smelters, and sulfate deposition in rainfall.

Extensive use of screen graphics such as maps, histograms, scatter plots and variograms help the user search for patterns, correlations, and problems in a data set. Individual programs can be run independently; the statistics and graphics routines may prove useful even when a full geostatistical study is not appropriate. For ease of use, the programs are controlled interactively through screen menus and use simple ASCII data files.

Specifications: Documentation included; may be ordered separately as PB93-163236. System: IBM-PC/XT/AT/PS-2 or compatible; DOS 3.0+ operating system, 640K. Language: Executable FORTRAN. The program requires 3 MB of storage. Math coprocessor recommended but not required. Graphics support is provided for Hercules, CGA, and EGA. Support is provided for plotters which accept HPGL plotting commands.

Geotechnical Analysis For Dike Stability; GARDS

Environmental Protection Agency

Order number PB87-130969CBX
Price: $125

The structure and capabilities of a user-friendly, interactive computer program developed for the stability analysis of dikes (GARDS) are described. The

GARDS program is designed to guide a geotechnical non-specialist (EPA regulatory personnel) through the customary steps of earth dike analysis considering slope stability, settlement, liquefaction, hydraulic flow and pressure conditions, and piping. The GARDS package is designed for use on the IBM-PC/XT microcomputer. User documentation consists of a combined Handbook/User's Manual (under development) which presents basic theory, program operational procedures, and example long hand and computer solutions for each analysis.

Specifications: The software is on four 5 1/4 inch diskettes, double density. System: IBM-PC/XT/AT or compatible; MS-DOS 2.1 + operating system, 512K.

◆ HARPX-A Program to Extend HARPO or HARPA Ray Paths in Horizontally Uniform Media

Department of Commerce, National Oceanic and Atmospheric Administration

Order number PB92-503531CBX
Price code: D02

A FORTRAN computer program HARPX was developed that can extend ray paths in horizontally uniform media if the ray paths have been calculated by either ray tracing program HARPO.or HARPA. The HARPX program extends HARPO or HARPA ray path calculations that have been made for two or three ray loops (hops) in a horizontally uniform medium to more loops and correspondingly longer ranges. The input is a HARPO or HARPA rayset file, and the output is another rayset file. The HARPX program extends the calculations in range by adding complete ray cycles to both odd and even ray loops. A floppy disk containing the program and sample input data is included.

Specifications: The software is on one 5 1/4 inch diskette, 360K double density. Documentation included; may be ordered separately as PB92-169903. System: IBM PC or Compatible; MS DOS operating system, 50K. Language: Fortran.

✱ ◆ HEC (IFH) Interior Flood Hydrology Package (Version 01.02.00)

Department of Defense, Army

Order number PB92-503598CBX
Price code: D04

A menu driven computer program for the personal computer to assist in the analysis of leveed interior areas. The program can be used to determine runoff into a ponding area adjacent to the levee and to route the inflow through the levee utilizing gravity outlets and/or pumping capacity. The rainfall-runoff process, streamflow routing, auxiliary inflow, diversions, and seepage can be simulated as well as complex configurations of gravity outlets and pumping facilities. Period-by-period, monthly, annual and total analysis summaries are generated for all applicable parameters during simulation. Interior area elevation-frequency relationships can be determined for various alternative plans by using continuous simulation or hypothetical storm event analysis. Plan summaries and comparisons can be readily viewed in tables or graphs.

Specifications: The software is on three 5 1/4 inch diskettes, 1.2M high density. Documentation included; may be ordered separately as PB92-169952 and PB92-218460. System: IBM compatible; MS DOS operating system. Language: FORTRAN 77. Files are decompressed by using INSTALC files provided on each diskette. Memory requirement: 10Mb (or larger) hard disk of which 2.5Mb is available for the program files; 4Mb of RAM memory, with at least 3Mb configured as extended memory; math coprocessor (8086-80486 or equivalent) required.

HEC 1, Flood Hydrograph Package, Version 4.0

Department of Defense

Order number PB91-505222CBX
Price code: D03

HEC-1 is a mathematical watershed model designed to simulate the surface runoff response of a river basin to precipitation by representing the basin as an interconnected system of hydrologic and hydraulic components. Each compomodels an aspect of the precipitation- runoff process within a portion of the basin. A component may represent a surface runoff entity, a stream channel of a reservoir, defined by parameters specifying its characteristics and the mathematical relations describing the physical processes. The result of the modeling process is computation of streamflow hydrographs at desired locations in the river basin. All ordinary flood hydrograph computations associated with a single recorded or hypothetical storm can be accomplished with this package. Capabilities include rainfall-snowfall-snowmelt determinations, computations of basin precipitation, unit hydrographs, kinematic wave transforms, and hydrograph; routing by reservoir, storage-lag, multiple storage, straddle-stagger, Tatum, Muskingum, and kinematic wave methods; and complete stream system hydrograph combining and routing. Best-fit unit hydrograph, loss-rate, snowmelt, base freezing temperatures and routing coefficients can be derived automatically. Automatic printer plot routines are also provided. Program may also be used to simulate flow over and through breached dams. Expected annual flood damage can be also be computed for any location in the river basin.

The software also includes: Interfacing to the HEC Data Storage System (HECDSS); utility programs to facilitate data management and entering data into the HECDSS; a graphs program called DSPLAY, which can be used to develop plots of any information stored in a HECDSS file; Muskingum-Cunge channel routing; reservoir release capabilities; and an input program (HEC1IN) to aid new users in developing an HEC-1 input file.

Specifications: The software is on five 5 1/4 inch diskettes, 360K double density. File format: ASCII. Documentation included; may be ordered separately as PB91-100446, PB91-100453, and PB91-100461. System: IBM-PC or compatible; MS/PC DOS 2.1 + operating system, 640K. Language: FORTRAN 77. Math coprocessor highly recommended but not required. Hard disk is required to run MENU 1..

HEC-2, Water Surface Profiles (Version 4.6.0)

Department of Defense

Order number PB91-506550CBX
Price code: D03

The HEC-2, program computes water surface profiles for one-dimensional steady, gradually varied flow in rivers of any cross section. Flow may be subcritical or supercritical. Various routines are available for modifying input cross-section data, for example, for locating encroachments or inserting a trapezoidal excavation on cross sections. The water surface profile through structures such as bridges, culverts and weirs can be computed. Variable channel roughness and variable reach length between adjacent cross section can be accommodated. The computational procedure is based on the solution of the one-dimensional energy equation with energy loss due to friction evaluated with Mannin's equation (Standard Step Method). The program is also designed for application in flood plain management and flood insurance studies to evaluate floodway encroachments and to designate flood hazard zones. Also, capabilities are available for assessing the effects of channel improvements and levees on water surface profiles. Printer plots can be made of the river cross sections and computed profiles. Input may be in either English or metric units. This release, dated September 1990, is the official version. It includes the features of the 1988 version, with error corrections 01 through 04, plus culvert hydraulics based on the Federal Highway procedures. Both PC programs, PLOT2 and SUMPO, have been updated to display culvert input and output information. The HEC-2 supplemental programs: EDIT2, PLOT2, SUMPO, and MENU2 carry the September 1990 date. The special culvert routine has been made to parallel the special bridge routine input, output, and general solution logic. This similarity should make it easier for experienced program users to use this new program feature

Specifications: The software is on four 5 1/4 inch diskettes, 360K double density. File format: ASCII. Documentation included; may be ordered separately as PB91-142422, PB91-142430, and PB91-100446. System: IBM/PC XT; MS DOS 2.1 or greater operating system, 450K. Language: Fortran77.

HEC-5, Simulation of Flood Control and Conservation Systems (Version 7.2) (Model-Simulation)

Department of Defense

Order number PB92-500263CBX
Price code: D06

HEC-5 is designed to simulate the sequential operation of a reservoir-channel system with a branched network configuration. Any time interval from one minute to a month can be used and multiple time intervals can be used within a single simulation. Channel routing can be performed by any of seven hydrologic routing techniques. Reservoirs operate to (1) minimize downstream flooding; (2) evacuate flood control storage as quickly as possible; (3) provide for low-flow requirements and diversions; and (4) meet hydropower requirements. Hydropower requirements can be defined for individual projects or for a system of projects. Pump-storage operation can also be simulated. Sizing of conservation (water supply and hydropower) storage can be automatically performed using the safe yield concept, and economic computations can be provided for hydropower benefits and flood damage evaluation. Includes the capability to read and write time-series data to the HEC-DSS (Data Storage System)

Specifications: The software is on nine 5 1/4 inch diskettes, 360K double density. File format: ASCII label. Documentation included; may be ordered separately as PB90-215245, PB90-215252, PB90-215260, PB90-215278, PB91-100446, PB92-102458, PB92-102466, PB92-102474. System: IBM PC/XT Compatible; DOS 3.0 or later operating system, 640K. Language: FORTRAN 77. One 5 1/4' floppy disk drive; 10Mb (or larger) hard disk of which 6Mb available for entire package of programs; One 1.2M (high density) diskette, HECDESS, is included with the package. Math coprocessor (8087, 80287, 80387) required. One Mb of extended memory should improve execution speed by 3 to 4 times.PKUNZIP.EXE is used to decompress files that have the.ZIP extension.

◆ HEC-6, Scour and Deposition in Rivers and Reservoirs (Version 4.0)

Department of Defense

Order number PB92-500255CBX
Price code: D03

The purpose of this one-dimensional sediment transport model is to calculate water surface and sediment bed surface profiles by computing the interaction between sediment material in the stream bed and the flowing water-sediment mixture. The total sediment load is computed for each cross section along with the trap efficiences for clays, silts and sands. The change in bed elevation, water surface elevation and thalweg elevation are also computed for each cross section. Dredging and in-stream gravel mining operations can be simulated and reservoir deposition can be analyzed with the model.

Specifications: The software is on four 5 1/4 inch diskettes, 360K double density. Documentation included; may be ordered separately as PB92-102177. System: IBM-PC/AT/XT or compatible; MS/PC/DOS 2.1 + operating system, 565K. Math coprocessor is recommended, but not required. The math coprocessor will greatly reduce the execution time of the program (increases computational speed by a factor of 5 to 10).

◆ Line Trace Plus (LTPlus) Version 2.30 UNIX System V (version 3.2.2)

Department of Agriculture, Foreign Agricultural Service

Orchid Graphics Board
Order number PB92-502186CBX
Price code: D05
VDC600 Graphics Board
Order number PB92-502194CBX
Price code: D05
SCO XENIX 2.3.2
Order number PB92-502004CBX
Price code: D05

LTPlus was designed to replace the line Trace System at the USDA-FS Geometronics Service Center in Salt Lake City. The old Line Trace package allowed a skilled operator to edit and assign attributes (elevation values) to contour lines which were initially captured by scanning reduced U.S. Geological Survey quadrangle map separations. The operator snapped

(connected lines through the gaps which existed for the printed elevation values and recorded the elevations as attributes to the contour line objects. The resulting product was a Digital Elevation Model (DEM) file.

The most efficient way to replace the Line Trace System was to convert a very successful and accepted program called LIDES (Local Interactive Digitizing and Editing System) from Hewlett Packard Extended BASIC language to the more universal 'C' language, and from the HP9020 BASIC operating system to a PC-based UNIX environment. All of the powerful capabilities of LIDES were ported to the new operating system in the 'C' language, and the package was enhanced to include all of the operations specific to Line Trace. The resulting software package, named LTPlus (for Line Trace Plus), offers these capabilities:

- Data input from manual digitizing, electronic scanning or from a variety of external application data formats.
- Full graphic raster and vector editing with mouse power.
- Automatic topology construction
- Flexible attribute assignment operations
- Dynamic set operations
- Selective plotting and reporting functions
- Wide range of export formats for external application compatibility
- Variety of user-friendly file management functions
- Powerful macro command language
- Valuable online help facility
- Complete geodetic referencing

These characteristics describe a software package which can offer enhanced, high speed line tracing capability and provide the means for the collection, topological structuring, attributing and formatting of all levels of resource data for input to a Geographic Information System(GIS). LTPLus can boast about one other, extremely significant attribute-It has a very strong human interface; this program will embrace the needs of the computer novice while still challenging the most calloused technocrat.

Specifications: **Diskette.** The software is on five 3 1/2 inch diskettes, 2 MB double density. Documentation included; may be ordered separately as PB92-169796 and PB92-169804. System: AT&T 6386; Unix System V Version 3.2.2/Later operating system. Language: Executable 'C'. Source Code.

SCO XENIX 2.3.2: The software is on two 5 1/4 inch diskettes, 1.2M high density. File format: Source code . Documentation included; may be ordered separately as PB92-169747, PB91-100834. System: 386 IBM compatible Machines; SCO Xenix 2.3.2 or later operating system. Language: Executable C .

◆ PROFILE - A Program to Generate Profiles From HARPO/HARPA Environmental Models

Department of Commerce, National Oceanic and Atmospheric Administration

Order number PB92-503523CBX
Price code: D02

A FORTRAN computer program, PROFILE, was developed that will generate plotting-command files for profile plots of the environmental models (e.g. sound speed, current or wind velocity, temperature) used with the acoustic ray tracing programs HARPO (underwater acoustics and HARPA (atmospheric acoustics). Profiles (plots of depth/height versus environmental model parameter) can be made for any longitude-latitude for models that depend on all three spatial dimensions. A companion report describes an associated plotting program that produces PostScript files as well as screen graphics for PC-compatible computers. An additional companion report describes a computer model parameters. Includes a floppy disk with computer programs and a sample case. Also included are instructions for obtaining the programs (with updates) via Internet.

Specifications: The software is on one 5 1/4 inch diskette, 1.2M high density. Documentation included; may be ordered separately as PB91-208710. System: Machine Independent; DOS, CYBER NOS, VAX VMS, & UNIX operating system. Language: Fortran.

◆ Shaly Sand Formation Evaluation in Tight Gas Sands Using Electrochemical Potential Measurements. GRI Spreadsheet to Estimate Conductivity and Water Saturation of Shaly Sand Formations from a Single Membrane Potential Measurement

Gas Research Institute

Order number PB93-504892CBX
Price code: D02

This report and spreadsheet have been developed to estimate the conductivity of shaly sands and the water saturation of shaly sand formations from a single membrane potential measurement at a known salinity. The program was written based on the equations developed in Appendix C of the report.

Specifications: The software is on one 3 1/2 inch diskette, 1.44M high density. Documentation included; may be ordered separately as PB93-163186. System: IBM compatible; MS DOS operating system. Language: Quattro.

* ◆ Urban Hydrology for Small Watersheds, 2nd Edition, Version 2.00 Executable Modules Only (TR-55) (Model-Simulation)

Department of Agriculture, Foreign Agricultural Service

Order number PB92-502905CBX
Price: $90

This program provides simplified procedures to calculate storm runoff volume, peak rates of discharge, and storage volumes required for stormwater detention basins. These procedures are applicable in small watersheds, especially urbanizing watersheds. The program provides for hydrologic analysis of a watershed under various combinations of land uses using single-event storm rainfall frequency data. The program can accomodate division of the watershed

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into subareas and will estimate individual subareas as well as total area peak rates of runoff.

Specifications: The software is on two 5 1/4 inch diskettes, 360K double density. The diskette(s) are in ASCII format. Documentation included; may be ordered separately as PB87-101580. System: IBM-PC or compatible; MS-DOS 2.1+ operating system, 256K. Language: BASIC . Hard disk or two floppy drives recommended.

Water Quality for River-Reservoir Sytems (Model-Simulation)

Department of Defense

Order number PB91-509984CBX
Price code: D04

The Water Quality for River-Reservoir Systems package consists of three separate computer programs.

Reservoir Water Quality - evaluates water quality conditions in a reservoir. The program is one-dimensional and is used to evaluate the vertical stratification for up to 18 physical, chemical, and biological parameters. This program is intended to interface on input (from upstream analysis) and output (for downstream analysis) with both the Stream Hydraulics Package and the Stream Water Quality computer programs.

Stream Hydraulics Package - evaluates velocity, flow and depth at regular time intervals in a stream network of branching channels and/or around islands. The hydraulic analysis can be performed using input stage-discharge relationships, backwater equations, hydrologic routines, or the unsteady flow equations at the user's option. SHP can also be used to produce a magnetic tape or disk interface for the 'Stream Water Quality' program and/or accept input from the 'Reservoir Water Quality' program for a river-reservoir system analysis. This program is also capable of accepting inflow hydrographs from STORM, and cross section geometry from HEC2 or GEDA.

Stream Water Quality - evaluates water quality conditions in a stream network of branching channels and/or around islands. It can be used to produce inflow quantity and quality input data for the Reservoir Water Quality program. This program also has the capability to accept inflow quantity and quality storm water runoff from the STORM computer program. The program is designed to accept hydraulic input from the Stream Hydraulics Package.

Specifications: The software is on three 5 1/4 inch diskettes, 360K double density. Documentation included; may be ordered separately as PB91-228460, PB91-228478, PB91-228486, PB91-228494, PB91-228502, PB91-228510. System: IBM compatible; MS DOS operating system, 640K. Language: FORTRAN 77. A 5 1/4-inch floppy drive and a 10 MB hard disk are required. A math coprocessor is highly recommended.

NAVIGATION

◆ Mapping Datum Transformation Software (MADTRAN) (Version 3.0)(for microcomputers)

Department of Defense

Order number PB93-500296CBX
Price code: D02

Program allows input from geodetic, Universal Transverse Mercator(UTM), or the Military Grid Reference System coordinates. Over 100 datums are available for transformation to or from the World Geodetic System (WGS) 84. Output is automatically presented as geodetic, UTM, and Military Grid Reference System coordinates. Geodetic coordinates can be computed in degrees, minutes, and/or seconds. A directory of internally documented source code is included for system developer use.

Specifications: The software is on one 5 1/4 inch diskette, 360K double density. File format: executable and source code. System: IBM compatible; MS DOS operating system, 640K. Language: BASICV/ASCII.

OCEAN SCIENCES & TECHNOLOGY

◆ Agulhas Atlas

Department of Defense

Order number AD-M000 098CBX
Price code: D02

The data from the Agulhas Atlas are presented from an experiment designed to explore the spatial and temporal structure of the Agulhas Current and Retroflecion by direct means. Information includes the one-day average currents, the path of the Agulhas Current, CTD stations in 'Live Atlas' format, SST frontal analyses (Chassignet and Olson, personal communication).

Specifications: The software is on one 5 1/4 inch diskette, 1.2M high density. File format: ASCII. Documentation included; may be ordered separately as AD-A237 209. System: IBM Compatible; MS DOS 3.3 or higher operating system. The use of a color monitor is recommended. Language is Microsoft Quick Basic Version 4.0 or higher. Source code is included. Files are in ASCII and are executable. Instructions for running the programs can be found in a file entitled 'read me' on the disk.

◆ EXXON Valdez Hindcast

Department of Commerce, National Oceanic and Atmospheric Administration

Order number PB92-503176CBX
Price code: D02

Once installed, the 'HindCast Player' HyperCard stack displays the spill trajectory of the EXXON Valdez oil spill in the Prince William Sound in March of 1989.

This product contains one compressed file and one documentation file. The file containing the documentation is named 'Read.me', and the compressed file is named 'Exxon HindCasts'. The compressed folder contains a moov file called 'EXXON Valdez', a Hyper Cord Stack called, 'HindCast Player v/2', and Apples QuickTimeTM extension file.

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Specifications: The software is on one 3 1/2 inch diskette, 1.44M high density. System: Macintosh II or Quadra Family; System 6.0.5 or System 7.0 operating system. Language: HyperCord 2.1. Decompressed files require 5.5 MB hard-disk space is required.

◆ Fixed Mooring Analysis Program (FIXMOOR)

Department of Defense

Order number AD-M000 051CBX
Price code: D02

The Fixed Mooring Analysis Program (FIXMOOR) analyzes the wind and current forces on ships moored to a pier and determines the resulting mooring line forces and lengths and the fender forces and deflections or set-offs. The program is based on the ship motions of yaw, sway, and surge as being the predominant motions affecting a ship moored to a pier.

Specifications: The software is on one 5 1/4 inch diskette, 360K double density. Documentation included; may be ordered separately as AD-A236 734. System: MS DOS Compatible; MS DOS 2.1 or better operating system.

◆ HARPO Ocean Acoustic Ray-Tracing Program

Department of Commerce, National Oceanic and Atmospheric Administration

Order number PB93-504934CBX
Price code: D02

A software program (designed to run on and IBM PC) to measure three dimensional ocean acoustic ray tracing.

Specifications: The software is on one 5 1/4 inch diskette, 1.2M high density. Documentation included; may be ordered separately as PB93-163202. System: IBM compatible; MS DOS operating system. Language: FORTRAN. Requires a minimum of 640 K and a math coprocessor.

◆ Relative Motion Between Ships in Random Seas (RELMO)

Department of Defense

Order number AD-M000 055CBX
Price code: D02

RELMO is a computer program written to calculate the relative motion between moored and unmoored vessels in shoal water. Moored, in the context of this usage, implies the vessel is only restrained in the surge direction. The mooring forces are assumed to be linear.

Specifications: The software is on one 5 1/4 inch diskette, 360K double density. Documentation included; may be ordered separately as AD-A236 737. System: MS DOS 2.1 or higher operating system. 512K memory and a math coprocessor required.

* ◆ Shoreline Segment Characteristics Handbook for Smear Model Application

Department of Interior

Order number PB92-502145CBX
Price code: D04

Five high-density floppy disks in R-Base format summarize the 6-volume 3,050 page data report which summarizes the data required to run the Coastline and Surf Zone Oil Spill Transport Model (also known as the Smear Model or COZOIL) for the majority of the coast of Alaska. The model is used to predict the transport and weathering of spilled oil onto and along shorelines deterministically or stochastically, assuming the presence of a spill. The data are organized by the shoreline segments and subsegments corresponding to the segments used by the Minerals Management Service in oil spill risk analysis. Data are included for beach morphology, near-shore oceanographic conditions, meteorological conditions and ocean fetch as affected by the presence of sea ice.

Specifications: The software is on five 5 1/4 inch diskettes, 360K double density. File format: R-Base. System: IBM-PC or compatible; MS DOS operating system, 640K.

PHYSICS

Graphical Plotting System for Displaying Scientific & Engineering Data; GRAPS

Department of Defense

Order number AD-A205 690CBX
Price: $55

Program provides a convenient, user-friendly tool for the display of engineering and scientific data in a number of conventional plot formats. Linear, simi-log, polar, Smith, and contour plot formats are among those that can be selected. User-friendly features include auto and user-defined scaling, text editing on graphic screens, and data file management options. Auto and user-defined scaling are new GRAPS features. The polar plots have been significantly improved and the contour plot added. The data file management options have also been expanded. Program will plot any data stored in ASCII files in the GRAPS format. It is intended to be used as a stand-alone utility for the preparation and display of engineering and scientific data. It is not suitable for inclusion as a part of another program, although subroutines could be stripped out for inclusion in other programs. It provides a screen display of the plot, with options to select the plot format, adjust the scale and scale tick marks, and create and edit the text labels on the plot. A visual display of the data which is similar to the final hard copy.

Specifications: The software is on two 5 1/4 inch diskettes, double density. System: IBM-PC or compatible; MS-DOS operating system, 256K. Language: QuickBASIC. The program will not run in the BASIC interpreter and it may not be compatible with other compilers without extensive modification..

◆ Integrated Refractive Effects Prediction System (IREPS) PC-2.0

Department of Defense

Order number AD-M000 028CBX
Price code: D02

The IREPS software has been developed to provide a shipboard environmental data processing and display capability for the comprehensive assessment of refractive effects upon naval surveillance, communications, electronic warfare, and weapon-guidance systems.

IREPS PC-2.0 is an upgrade to IREPS PC-1.0, released in March 1989. IREPS PC-2.0 has a completely restructured file management system, a new screen-handling system which supports the use of a mouse, and an automatic product-generation mode, called AUTOMODE.

Specifications: The software is on one 5 1/4 inch diskette, 360K double density. Documentation included; may be ordered separately as AD-A228 549. System: IBM PC or Compatible; DOS 2.2 and above operating system. Language: Compiled FORTRAN. Required Peripherals: CGA or EGA compatible.

SPACE TECHNOLOGY

Space Systems Cost Study

Department of Defense

Order number AD-A213 984CBX
Price: $55

The objective of the 'Space System Cost Study' was to a methodology and automated database/model that would enable DARPA to evaluate 'low cost satellite' programs and appropriate cost reduction approaches. The initial step in this cost study was to derive an estimate for developing and producing a 'light' satellite under 'business as usual' conditions. These conditions include a 'start from scratch' philosophy and all the traditional operating procedures and documentation associated with building a reliable spacecraft.

The significance of the baseline cost modeling effort was to determine a cost estimate that would represent the current culture of the satellite industry. This culture generally follows a 'business as usual', 'start from scratch' development approach. The baseline program emulates a typical Space Division (U.S. Air Force Space Division) Mil-Std 1450B-type spacecraft. The vehicle mission type used for the analysis is a communications-radio relay spacecraft. The cost estimates and trades to the baseline developed as a result of this study, are applicable to any spacecraft that contains a similar functional mix of structure, payload, and electronics.

The modeling process included evaluating three phases of hardware and software activities: the development Phase, the Produceability Engineering Phase, and the production Phase. The baseline program included cost values for each discrete item (up to 112) for the three phases of effort: Development , PEP< and Production. The 112 discrete items modeled and their costs were contained in the automated database/model. Each item carried through the PEP and Production Phases, if appropriate.

After the baseline program cost values were established (modeled), a list of candidate cost variables was established. These variables represent cost reduction approaches that address virtually all elements comprising the total program cost. The cost variables were targeted as items that could be controlled by the contracting agency or contractor. This control could be exerted either by specifications or special instructions to exclude/include the activity from a normal spacecraft development approach. All of the investigated candidate variables had a potential for program cost savings. Each had three options or degrees of sensitivity. This implied that the activities associated with candidate variables could be implemented completely or as a subset. The automated database/model (DARPASS) contains the cost results for each item/task for each candidate variable (Primary and secondary) and the three options for each. The total number of results derived as a product of this study exceeds 45,000. The RCA PRICE H Hardware model was selected as the cost estimating tool for all items except software, which was estimated using Martin Marietta'a in-house model, PCEM (software Parametric Cost Estimating Model.

Specifications: The software is on two diskettes, double density. System: IBM-PC or compatible; MS DOS 2.1 + operating system, 256K. Language: PASCAL.

TRANSPORTATION TECHNOLOGY

* Airport Design (Version 2.3B)

Federal Aviation Administration

IBM PC Compatible, 1.2M high density
Order number PB92-501790CBX
Price code: D02
IBM PS/2 Compatible, 720K double density
Order number PB92-501808CBX
Price code: D02

Specifications: The software is on one 3 1/2 inch diskette, .

The program calculates runway wind coverage and site specific dimensions based on airport design standards and recommendations. These dimensions are: runway, taxiway and taxilane widths and clearances; recommended runway lengths; exit taxiway, taxiway intersection, and taxiway curve layout data and analysis, and wing tip clearance analysis; and printing or plotting the taxiway and taxilane analysis results.

Version 2.1 enhancements include the following. 1. Exit taxiway configurations in addition to those requiring rapid exit capabilities. These exits include most nonrapid right-angled exit taxiways such as typical runway end exit taxiways. 2. Runway and taxiway width and clearance standard dimensions for airports served by airplanes with fold-up wings. Those airplanes have one wingspan for taxiing and another for takeoff and landing. 3. Windrose images suitable for importing into Word Perfect 5.0 with the Word Perfect 5.0 Grab utility. 4. Hot keys to access help instructions, change drives and directories, and perform special functions. 5. Input tables displaying the acceptable input options of items with more than two discrete input options. 6. The option to list and preview files prior to retrieval. This coupled with being able to change drives and directions at will, facilitates retrieving files. 7. Capability for retaining all input data until replaced. 8. Capability for previewing the windrose when creating a windrose Design CAD2D (formerly Prodesign II) PD1 file.

Version 2.2 enhancements include: providing declared distance length calculations; providing X,Y coordinates for taxiway exit, intersection, curve centerline, and left and right offset distances; deleting and reinstating wind data on command; calculating the length of an exit taxiway section required to close the exit taxiway on the parallel taxiway; and saving the data base at the end of one section and retrieving it at the start of the next section (this feature is only available on microcomputers with directory C:\AD).

Version 2.3 enhancements include: runway wind coverage analysis expanded to handle up to a six runway configuration with bi-directional and uni-directional runways.; instructions expanded for calculating declared distances; and calculates declared distances for runways with clearways located other than at the runway end. The program can be run in either U.S. customary units or SI units.

Version 2.3B enhancements include: program expanded to include files loadable into WordPerfect 5.0, AUTOCAD, and other CAD/CAM systems.

Specifications: MS-DOS 3.1 or higher operating system, 640K. Language: TURBO C. Airport Design works best with a math coprocessor and a color monitor.

Decision Support System Plan & Management

Department of Transportation

Order number PB86-107125CBX
Price: $165

A decision support system has been developed for the waterways between the Port of New Orleans and the Gulf of Mexico. The system is implemented for the IBM Personal Computer or compatible using the Lotus 1-2-3 applications software. The system is contained on seven (7) diskettes and consists of approximately 30 worksheet files which are tied together with the main Port of New Orleans Information System file menu. Space specific information about the port and its environment is indexed using one dimensional coordinates along the axes of the major waterways. An atlas shows the coordinate systems. Where applicable, standard river miles can be used as coordinates. Information is organized into individual Lotus 1-2-3 worksheet files that are further assembled by subject matter into subdirectories. Additional worksheet files can readily be added to meet changing general needs and an organization's specific requirements. Information about the port can be retrieved using a sequence of menu selections or by going directly to the appropriate worksheet. Each worksheet is programmed to provide ready answers to anticipated questions. The output from the system can be in a variety of visual, printed or file formats. The methodology for providing ready access to information relevant to port planning and management developed for the Port of New Orleans can readily be adapted for other ports.

Specifications: The software is on seven 5 1/4 inch diskettes, double density. System: Lotus 1-2-3; PC-DOS 2.0 + operating system, 320K. Requires Lotus 1-2-3.

✱ ◆ FAA Airfield Capacity Model

Federal Aviation Administration

Order number AD-M000 143CBX
Price code: D03

The FAA Airfield Capacity Model, a computer program designed to quickly calculate the runway capacity of an airport, has recently been upgraded.

Several new features have been implemented in the upgraded version. Among these are improved input and output formats for easier usage, the capability to compute runway capacity for up to eleven different percentages of arrivals in a single run (as opposed to a separate run for each percentage), and provisions for calculating the capacity of alternating arrivals to a pair of parallel runways. Several other runway configurations have been added to the model, or improved, as well.

Specifications: The software is on one 3 1/2 inch diskette, 720K double density. Documentation included; may be ordered separately as ADA105688. There is a Supplemental User's Guide available, but not included, the order number is ADA-104154. System: IBM compatible; MS DOS operating system. Language: FORTRAN. The diskette also includes a sample batch file that can be used to run the model, sample input and output files, and a README.TXT file that contains additional information about the model. Core requirement 210K.

Grade Severity Rating System (GSRS)

Order number PB90-501917CBX
Price code: D02

Program is a computerized procedure using downgrade geometrics to determine the appropriate maximum safe descent speeds for large trucks on steep downgrades. The purpose of the GSRS is to reduce the probability of large truck runaways on steep downgrades. It's based on a model that uses gross truck weight and the physcial characteristics of the downgrade to predict the truck system's brake temperature. The temperature estimates are used to determine maximum safe descent speeds for various categories of truck weights. The maximum safe descent speed information is presented to the truck drivers by weight specified speed signs installed on the downgrade. In addition to determining the maximum safe descent speeds for trucks, the procedure may be used to establish truck downhill speed limits, establish the need for and location of truck escape ramps, and analyze truck accidents.

Specifications: The software is on one 5 1/4 inch diskette, double density. System: IBM-PC or compatible; Dos 3.0+ operating system, 640K. Language: Basic.

Headquarters Motor Vehicle Management System (HMVMS)

Department of Housing and Urban Development

Order number PB88-216379CBX
Price code: D01

Specifications: The software is on one 5 1/4 inch diskette, double density. System: IBM-PC or compatible.

✱ Paratransit Vehicle Maintenance Management Software (PVM)

Department of Transportation

Order number PB92-504414CBX
Price code: D01

Program is a vehicle maintenance management software package written for small paratransit agencies. Modules

of the package include: vehicle histories (specifications, equipment, purchase price); preventive maintenance scheduling; vehicle repairs; and performance reports. It is written in D-Base III Plus™ programming language and compiled under the Wordtech Quicksilver™ compiler. The program is menu-driven and provides user-defined parameters.

Specifications: The software is on one diskette, double density. Documentation included; may be ordered separately as PB91-104455. System: IBM PC AT or compatible; MS DOS 3.3 or higher operating system. Language: DBase III Plus .

Parking Control System; PCS

Department of Housing and Urban Development

Order number PB88-216403CBX
Price code: D01

A menu driven application which inventories all data relating to parking permits. It cross checks names, addresses, phone numbers, and license plate numbers. In addition, it provides various reports, such as the nature of the permit,(job requirement, handicapped, carpool, or vanpool) possible duplicate and fraudulent applications, and carpool referrals.

Specifications: The software is on one 5 1/4 inch diskette, double density. System: IBM-PC or compatible.

Port Economic Impact Kit

Department of Transportation

Order number PB86-225539CBX
Price: $90

The Port Economic Kit provides an effective methodology (automated or manual) to determine port economic impacts for small- and medium size ports. The Kit quantifies the importance of a port in terms of purchases, income, employment, and taxes generated. This is accomplished by examining the impacts of the local port industry, the local port user industries and port capital spending. For each type of port activity identified above, the economic effects or impacts can be separated into the direct, indirect, and induced categories.

Specifications: The software is on two 5 1/4 inch diskettes, double density. System: IBM-PC or compatible. Language: FORTRAN.

Port Economic Impact Kit, LOTUS 1-2-3

Department of Transportation

Order number PB88-127881CBX
Price: $90

Specifications: The software is on two 360K 5 1/4 inch diskettes, double density. File format: Lotus 1-2-3 (Diskette). The diskette(s) are in ASCII format. System: IBM PC/ XT or compatible. Language: FORTRAN.

◆ TUNVEN and DUCT Programs

Department of Transportation, Federal Highway Administration

Order number PB93-504850CBX
Price code: D02

This diskette contains two computer programs relating to the design and operation of highway tunnel ventilation systems.

The TUNVEN program solves the coupled one dimensional steady state tunnel aerodynamics and advection equations to obtain the longitudinal air velocities and pollutant concentrations for a given tunnel design, traffic load and ventilation rate. The effect of ambient conditions external to the tunnel such as portal winds and local pollutant levels can also be included. This program can be used to determine ventilation requirements for natural, longitudinal, semi-transverse and transverse ventilation systems.

The DUCT program calculates the air flow through the individual ports connecting the ventilation duct to the roadway in a semitransverse ventilation system. It can be used to design a port or to determine the flow pattern through a set of existing ports under off-design conditions. The development of these programs by the study 'The Management of Air Quality In and Near Highway Tunnels' is discussed in the final report 'Aerodynamics and Air Quality Management of Highway Tunnels' (PB80-143803).

Specifications: The software is on one 3 1/2 inch diskette, 1.44M high density. Documentation included; may be ordered separately as PB80-141575. System: IBM compatible; MS DOS operating system.

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Title Index

A

ADA Compiler Validation Capability: ACVC Version 1. 19

Agulhas Atlas 34

Airport Design (Version 2.3B, IBM PC Compatible) 36

Airport Design (Version 2.3B, IBM PS/2 Compatible) 37

An Overview of the Structural Ceramics Database (Re 27

AnyPIA - (Primary Insurance Amount) - A Program to 9

Astrodynamic CAI Software 6

Automan 2.0: Decision Support Software for Automate 9, 10

Automated Interstate Child Support Enforcement Form 5

B

Blood-Tissue Exchange Models, BTEX 30 & 40 24

Boring Log Design File Builder, Version 2.01 12

Building Life Cycle Cost Computer Program (BLCC) Ve 8

C

Calculation of Galactic Radiation Dose Equivalent R 24

Cashflow Sensitivity Analysis/Lotus 1-2-3 10

Cavitation In Chutes and Spillways Version 1.0 30

CHEMLEARN; Microcomputer-Based Training for CHEMLIN 26

Civilian Availability Model (CAM) 29

COBRA-The Base Closing Model 10

Code Excited Linear Prediction (CELP), Ver. 3.2 16

Computer Aided Load Manifesting (CALM) Program Code 5

Computer Aided Load Manifesting (CALM) Source Code 5

Computer Programming and Group Theory 17

CONPLT-A Program to Generate Contours from HARPO/HA 30

Cut Order Planning (COP) in Apparel Manufacturing, ... 27

D

d-SSYS: A Computer Model for the Evaluation of Comp 4

DA's Assistant, Version 1.0 4

Data Collection Selection™ 2

Decision Support System Plan & Management 37

Defense Data Network X.25 DTE Conformance Test Soft 19

Departmental Directives Management Information Syst 4

Designer Research™ 2

Distributed Training Technology Cost Analysis Templ 4

DNAdraw (Version 3.52) 29

E

ERRC Food Process Simulator 6

EX-SAMPLE+™ 2

Export to Win 10

EXXON Valdez Hindcast 35

F

FAA Airfield Capacity Model 37

Federal Occupational and Career Information System 5

Fiber Optic Radiation Attenuation Model (FIBRAM) 14

FIPS-SGML (Standard Generalized Markup Language) Pa 17

Fixed Mooring Analysis Program (FIXMOOR) 35

Flyfitter (Phenomenological fitting Procudure for t 17

Forms, Issuances & Publications System 10

Furniture and Equipment Management System (FEMIS) 11

G

Geo-EAS: Software for Geostatistics 1.2.1 (3 1/2 in 30

Geo-EAS: Software for Geostatistics 1.2.1 (5 1/4 in 30

Geotechnical Analysis For Dike Stability; GARDS 31

Geotechnical Application Programs for Computer Aide 17

Grade Severity Rating System (GSRS) 37

Graphical Plotting System for Displaying Scientific 35

Grateful Med MacIntosh Version 24

Grateful Med Version 5.0 25

Gray-Scale Linear Mapper (GLM) 17

GROUPER with Medicare Code Editor (HG/MCE) Version 25

H

HARPO Ocean Acoustic Ray-Tracing Program 35

HARPX-A Program to Extend HARPO or HARPA Ray Paths 31

Hazard Communication Project; Computer Based Traini 29

HAZARD I Fire Hazard Assessment Method 8

HCFA Grouper with Medicare Code Editor (HG/MCE) Ver 25

Headquarters Motor Vehicle Management System (HMVMS 37

Heating Plant Options Economic Analysis System (HPE 11

HEC (IFH) Interior Flood Hydrology Package (Version 31

HEC 1, Flood Hydrograph Package, Version 4.0 31

HEC-2, Water Surface Profiles (Version 4.6.0) 32

HEC-5, Simulation of Flood Control and Conservation 32

HEC-6, Scour and Deposition in Rivers and Reservoir 32

HNCFRAME version 1.0 12

Hospital Energy Analysis Toolkit (HEAT) 21

Hyper-Stat™ (Windows Version)(for microcomputers) 2

HyperCard Database for the Natural Language Sourceb 17

I

Image 1.49 18

INPUFF 6

Insect Version 1.0 7

Integrated Refractive Effects Prediction System (IR 36

International Nuclear Model (INM92) 23

International Trade Information System: Japan, Taiw 11

Ionospheric Communications Analysis and Prediction 14

L

Levelized Nuclear Fuel Cost Code 21

Line Trace Plus (LTPlus) Version 2.30: UNIX System 32, 33

Line Trace Plus (LTPlus):SCO XENIX 2.3.2 33

Low Income Household Energy Assistance Program (LIH 21

M

Mapping Datum Transformation Software (MADTRAN) (Ve 34

Market Penetration Models, 1992 21

Measurement and Scaling Strategist™ 3

Methodologist's Toolchest Professional™ (Set) 3

MICA. Interactive Astronomical Almanac (DOS Version 6

Microcomputer Spectrum Analysis Models (MSAM) Sourc 15

Minnesota Wetland Evaluation Methodology for the No 7

MLRP - Multiple Linear Regression Program 27

Multilayer User-Friendly Thermal Model in 1 Dimensi 12

MUMPS Validation Suite, Version 7.61, 1991 19

N

National Fire Incident Report System Version 4.0 8

Nihongo Tutorial System 20

NLM Micorocomputer-based Tutorials 1992 26

O

Oak Ridge Uranium Market Model, 1992 23

Oil Market Simulation Model, 1992 22

Outpatient Code Editor(OCE) Version 8.0 25

P

Paratransit Vehicle Maintenance Management Software 38

Parking Control System; PCS 38

PC-OMNITAB: An Interactive System for Statistical a 27

PCMINSIM: Discounted Cash Flow Rate of Return (DCFR 11

PDQ User's Guide (with PDQ Access)(Version2.01)(for 25

Pdwriter (Position Description Writer), Version 4.0 12

Physician Claim Entry System 26

Port Economic Impact Kit 38

Prestressed Concrete Beam Design and Analysis (PRES 13

PROFILE - A Program to Generate Profiles From HARPO 33

PSGRAPH- A Plotting Program for PC-HARPO, PROFILE, ... 18

Q

Questionnaire Programming Language (QPL) Demonstrat 18

R

Relative Motion Between Ships in Random Seas (RELMO 35

Risk Assessment Matrix (RAM) 9

S

Salmonella Data Management Software 29

Sampling Design Software Version 2.0 28

SEMEX - A Program to Extract Particle Size From Sca 12

Separation of Simultaneous Word Sequences Using Mar 28

Severity Classification System for AIDS Hospitaliza 26

Shaly Sand Formation Evaluation in Tight Gas Sands 33

Shoreline Segment Characteristics Handbook for Smea 35

Space Systems Cost Study 36

STAT 2 Version 2.00A 21

Static Analysis of Framed Structures 13

Static Analysis of Plane Frame and Truss Structures 13

Statistical Approach to Predicting Chronic Toxicity 8

Statistical Export and Tabulation System (SETS) Des 18

Statistical Navigator Professional™ 3

Statistical Process Control Software, (SPC) Version 19

Structural Analysis Code Kit (SACK) . 13

Subspace Iteration Algorithms in FORTRAN 77 & FORTR 28

Super High Frequency (SHF) Link Analysis Model (SLA 15

SYNOP (Synoptic Rainfall Data Analysis Program) 7

Systematic Acquisition Requirements Tailoring and S 7

T

Telecommunications Lines Management System (TLMS) 16

Terrain-Integrated Rough-Earth Model (TIREM) Source 16

Toxicology Information Program (TIP) Files Demo Dis 27

Training Information Program 20

Troubleshooting, Assessment, and Enhancement (TAE) 20

TUNVEN and DUCT Programs 38

U

Uniform Clinical Data Set System (UCDSS) Software (..... 26

Urban Hydrology for Small Watersheds, 2nd Edition, ... 34

USDA Dietary Analysis Program, 1.2M24

User Friendly IBM Personal .... Computer Program 29

V

VENT II (Version 4.1) An Interactive Program for De 22

Voice of America Coverage Analysis Program (VOACAP) 16

W

Water Quality for River-Reservoir Sytems 34

Wave Equation Analysis of Pile Driving (WEAP) Progr 13

WESHAKE for Personal Computers Version 1.0 14

WhichGraph™ 3

WIC, FEJE, SFI Modules, Version 2.2 . 14

WINDROSE 7

World Energy Projection System (WEPS93) 1993 23

World Integrated Nuclear Evaluation System 1991 (WI 23

Z

Zip-Code Insulation Program (ZIP) 9

Agency Index

Department of Agriculture

Foreign Agricultural Service
ERRC Food Process Simulator 6
International Trade Information System: Japan, Taiw 11
Line Trace Plus (LTPlus) Version 2.30: UNIX System 32, 33
Line Trace Plus (LTPlus):SCO XENIX 2.3.2 33
Urban Hydrology for Small Watersheds, 2nd Edition, ... 34
USDA Dietary Analysis Program, 1.2M 24

Department of Commerce

Export to Win 10

National Institute of Standards and Technology
An Overview of the Structural Ceramics Database (Re 27
Automan 2.0: Decision Support Software for Automate 9, 10
Building Life Cycle Cost Computer Program (BLCC) Ve 8
Fiber Optic Radiation Attenuation Model (FIBRAM) 14
FIPS-SGML (Standard Generalized Markup Language) Pa 17
HAZARD I Fire Hazard Assessment Method 8
Hospital Energy Analysis Toolkit (HEAT) 21
PC-OMNITAB: An Interactive System for Statistical a 27
STAT 2 Version 2.00A 21
Zip-Code Insulation Program (ZIP) .. 9

National Institute of Standards and Technology,
MUMPS Validation Suite, Version 7.61, 1991 19

National Oceanic and Atmospheric Administration
CONPLT-A Program to Generate Contours from HARPO/HA 30
EXXON Valdez Hindcast 35
HARPO Ocean Acoustic Ray-Tracing Program 35
HARPX-A Program to Extend HARPO or HARPA Ray 31
PROFILE - A Program to Generate Profiles From HARPO 33
PSGRAPH- A Plotting Program for PC-HARPO, PROFILE, ... 18

National Technical Information Service
Cashflow Sensitivity Analysis/Lotus 1-2-3 10

National Telecommunications and Information Admi
Ionospheric Communications Analysis and Prediction 14
Microcomputer Spectrum Analysis Models (MSAM) Source 15
Microcomputer Spectrum Analysis Models (MSAM), Version 15
Microcomputer Spectrum Analysis Models (MSAM) 15
Terrain-Integrated Rough-Earth Model (TIREM) Source 16
VENT II (Version 4.1) An Interactive Program for De 22

Department of Defense

ADA Compiler Validation Capability: ACVC Version 1. 19
Agulhas Atlas 34
Boring Log Design File Builder, Version 2.01 12
COBRA-The Base Closing Model 10
Code Excited Linear Prediction (CELP), Ver. 3.2 16
Computer Aided Load Manifesting (CALM) Program Code 5
Computer Aided Load Manifesting (CALM) Source Code 5
Distributed Training Technology Cost Analysis Templ 4
Fixed Mooring Analysis Program (FIXMOOR) 35
Flyfitter (Phenomenological fitting Procudure for t 17
Geotechnical Application Programs for Computer Aide 17
Graphical Plotting System for Displaying Scientific 35
Gray-Scale Linear Mapper 17
Heating Plant Options Economic Analysis System (HPE 11
HEC 1, Flood Hydrograph Package, Version 4.0 31
HEC-2, Water Surface Profiles (Version 4.6.0) 32
HEC-5, Simulation of Flood Control and Conservation 32
HEC-6, Scour and Deposition in Rivers and Reservoir 32
HNCFRAME version 1.0 12
HyperCard Database for the Natural Language Sourceb 17
Insect Version 1.0 7
Integrated Refractive Effects Prediction System (IR 36
Mapping Datum Transformation Software (MADTRAN) (Ve 34
Minnesota Wetland Evaluation Methodology for the No 7
MLRP - Multiple Linear Regression Program 27
Pdwriter (Position Description Writer), Version 4.0 12
Prestressed Concrete Beam Design and Analysis (PRES 13
Relative Motion Between Ships in Random Seas (RELMO 35
SEMEX - A Program to Extract Particle Size From Sca 12
Separation of Simultaneous Word Sequences Using Mar 28
Space Systems Cost Study 36
Static Analysis of Framed Structures . 13
Static Analysis of Plane Frame and Truss Structures 13
Statistical Process Control Software, (SPC) Version 19
Structural Analysis Code Kit (SACK) . 13
Subspace Iteration Algorithms in FORTRAN 77 & FORTR 28
Super HIgh Frequency (SHF) Link Analysis Model (SLA 15
Systematic Acquisition Requirements Tailoring and S 7
Troubleshooting, Assessment, and Enhancement (TAE) 20
Water Quality for River-Reservoir Sytems 34
WESHAKE for Personal Computers Version 1.0 14
WIC, FEJE, SFI Modules, Version 2.2 14

Air Force
Astrodynamic CAI Software 6
Civilian Availability Model 29
Computer Programming and Group Theory 17

Army
HEC (IFH) Interior Flood Hydrology Package (Version 31

Defense Communications Agency
Defense Data Network X.25 DTE Conformance Test Soft 19

Defense Logistics Service Center
Cut Order Planning (COP) in Apparel Manufacturing, ... 27

Department of Energy

Oil Market Simulation Model 22

Energy Information Administration

International Nuclear Model (INM92) 23

Levelized Nuclear Fuel Cost Code 21

Low Income Household Energy Assistance Program (LIH 21

Market Penetration Models 21

Oak Ridge Uranium Market Model, 1992 23

World Energy Projection System (WEPS93) 1993 23

World Integrated Nuclear Evaluation System 1991 (WI 23

Department of Health and Human Services

AnyPIA - (Primary Insurance Amount) - A Program to 9

Automated Interstate Child Support Enforcement Form 5

PDQ User's Guide (with PDQ Access)(Version2.01)(for 25

Health Care Finance Administration

GROUPER with Medicare Code Editor (HG/MCE) Version 25

HCFA Grouper with Medicare Code Editor (HG/MCE) Ver 25

Outpatient Code Editor(OCE) Version 8.0 25

Physician Claim Entry System 26

Uniform Clinical Data Set System (UCDSS) Software 26

National Center for Health Statistics

Statistical Export and Tabulation System (SETS) Des 18

National Institutes of Health

Blood-Tissue Exchange Models, BTEX 30 & 40 24

DNAdraw (Version 3.52) 29

Image 1.49 18

National Library of Medicine

CHEMLEARN; Microcomputer-Based Training for CHEMLIN 26

Grateful Med MacIntosh 24,25

NLM Micorocomputer-based Tutorials 1992 26

Toxicology Information Program (TIP) Files Demo Dis 27

Department of Housing and Urban Development

Departmental Directives Management Information Syst 4

Forms, Issuances & Publications System 10

Furniture and Equipment Management System (FEMIS) 11

Headquarters Motor Vehicle Management System 37

Parking Control System; PCS 38

Telecommunications Lines Management System (TLMS) 16

Department of Interior

Cavitation in Chutes and Spillways Version 1.0 30

PCMINSIM: Discounted Cash Flow Rate of Return (DCFR 11

Shoreline Segment Characteristics Handbook for Smea 35

WINDROSE 7

Department of Justice

DA's Assistant, Version 1.0 4

Department of the Army

US Army Corps of Engineers

Sampling Design Software Version 2.0 28

Department of the Navy

U.S. Naval Observatory

MICA. Interactive Astronomical Almanac 6

Department of Transportation

Decision Support System Plan & Management 37

Multilayer User-Friendly Thermal Model in 1 Dimensi 12

Paratransit Vehicle Maintenance Management Software 38

Port Economic Impact Kit 38

Federal Highway Administration

SYNOP (Synoptic Rainfall Data Analysis Program) 7

TUNVEN and DUCT Programs 38

Wave Equation Analysis of Pile Driving (WEAP) Progr 13

Environmental Protection Agency

d-SSYS: A Computer Model for the Evaluation of Comp 4

Geotechnical Analysis For Dike Stability; GARDS 31

INPUFF 6

Salmonella Data Management Software 29

Statistical Approach to Predicting Chronic Toxicity 8

User Friendly IBM Personal Computer Program 29

Office of Research and Development

Geo-EAS: Software for Geostatistics 1.2.1 (3 1/2 in 30

Geo-EAS: Software for Geostatistics 1.2.1 (5 1/4 in 30

Executive Office of the President

Office of Personnel Management

Federal Occupational and Career Information System 5

Hazard Communication Project; Computer Based Traini 29

Training Information Program, Version 1.0 (3 1/2-in 20

Training Information Program, Version 1.0 (5 1/4-in 20

Federal Aviation Administration

Airport Design (Version 2.3B, IBM PC Compatible) 36

Airport Design (Version 2.3B, IBM PS/2 Compatible) 37

Calculation of Galactic Radiation Dose Equivalent R 24

FAA Airfield Capacity Model 37

Federal Emergency Management Administration

National Fire Incident Report System Version 4.0 8

Gas Research Institute

Shaly Sand Formation Evaluation in Tight Gas Sands 33

General Accounting Office

Questionnaire Programming Language (QPL) 18

General Services Administration

Office of Small and Disadvantaged Business Utilization

Risk Assessment Matrix 9

Idea Works, Inc.

Data Collection Selection™ 2

Designer Research™ 2

EX-SAMPLE+™ 2

Hyper-Stat™ 2

Measurement and Scaling Strategist™ 3

Methodologist's Toolchest Professional™ 3

Statistical Navigator Professional™ 3

WhichGraph™ 3

National Science Foundation

Nihongo Tutorial System 20

United States Information Agency

Bureau of Broadcasting

Voice of America Coverage Analysis Program 16

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N03	20

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E03	17.50
E04	20.50
E05	22.50
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E08	32.00
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E10	38.00
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E13	48.00
E14	52.00
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D06	300
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D08	410
D09	460
D10	520
D11	570
D12	630
D13	680
D14	740
D15	790
D16	840
D17	890
D18	950
D19	1,000
D99	*Contact NTIS for price*

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T03	360
T04	480
T05	590
T06	710
T07	820
T08	940
T09	1,050
T10	1,160
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T12	1,390
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A99	*Contact NTIS for price*

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N02	75
N03	40

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E02	31
E03	35
E04	41
E05	45
E06	51
E07	57
E08	64
E09	70
E10	76
E11	82
E12	90
E13	96
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E18	144
E19	160
E20	184
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D05	500
D06	600
D07	720
D08	820
D09	920
D10	1,040
D11	1,140
D12	1,260
D13	1,360
D14	1,480
D15	1,580
D16	1,680
D17	1,780
D18	1,900
D19	2,000
D99	*Contact NTIS for price*

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T03	720
T04	960
T05	1,180
T06	1,420
T07	1,640
T08	1,880
T09	2,100
T10	2,320
T11	2,540
T12	2,780
T13	3,000
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Supports research decisions, *page 2*

Structural analysis, *page 13*

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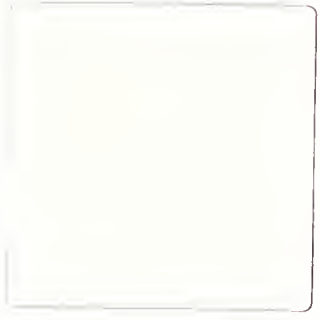
Automates the statistical process, *page 19*



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